EXHIBIT D

Page 1

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS

IN RE:)
) CA No. 01-12257-PBS
PHARMACEUTICAL INDUSTRY AVERAGE   ) CA No. 06-11337-PBS
WHOLESALE PRICE LITIGATION   ) Pages 1 - 98
)

            DAUBERT HEARING - DAY ONE

      BEFORE THE HONORABLE PATTI B. SARIS
         UNITED STATES DISTRICT JUDGE

                    United States District Court
                    1 Courthouse Way, Courtroom 19
                    Boston, Massachusetts
                    December 10, 2009, 2:10 p.m.

                    LEE A. MARZILLI
                 OFFICIAL COURT REPORTER
              United States District Court
              1 Courthouse Way, Room 7200
                   Boston, MA 02210
                    (617)345-6787

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1 A P P E A R A N C E S:
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10
   FOR THE DEFENDANTS:
11
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Page 3

1   I N D E X
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   WITNESS   DIRECT CROSS REDIRECT RECROSS
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4 MARK G. DUGGAN
5   By Mr. Lavine: 25
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1   P R O C E E D I N G S
2   THE CLERK: In Re: Pharmaceutical Industry Average
3 Wholesale Price Litigation, Civil Action 01-12257 and 06-11337,
4 will now be heard before this Court. Will counsel please
5 identify themselves for the record.
6   MR. HENDERSON: George Henderson for the United
7 States.
8   MR. LAVINE: Mark Lavine with the U.S. Attorney's
9 office for the Southern District of Florida for the United
10 States.
11   MR. BREEN: Jim Breen for the realtor Ven-A-Care of
12 the Florida Keys.
13   MS. ST. PETER-GRIFFITH: Ann St. Peter-Griffith,
14 United States Attorney's Office, Southern District of Florida,
15 on behalf of the United States.
16   MR. FAUCI: Jeff Fauci, U.S. Attorney's office in
17 Massachusetts.
18   MS. BROOKER: Renee Brooker, U.S. Department of
19 Justice, Civil Division, Commercial Litigation Branch in
20 Washington.
21   THE COURT: That's a mouthful.
22   MR. DALY: Good afternoon, your Honor. James R. Daly
23 on behalf of Abbott Laboratories.
24   MR. TORBORG: David Torborg on behalf of Abbott
25 Laboratories.

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1   THE COURT: All right. So today we're doing a Daubert
2 hearing, is that right?
3   MR. HENDERSON: That's correct, your Honor.
4   MR. DALY: Yes.
5   THE COURT: You all set up a very aggressive agenda
6 for me. We will not be getting to the motions for summary
7 judgment. There was some proposal that we do. I haven't even
8 read them. It took me four days just to read the Daubert and
9 the spoliation papers, without even going into all the
10 appendices. I don't know how you thought I was going to do the
11 summary judgment motions too, but that's just not going to
12 happen. So I'm unprepared, and it can't happen.
13   So as far as I'm concerned, I'm going to take my time
14 trying to understand the statistics. I understand I've got
15 three witnesses anyway, is that right?
16   MR. DALY: Yes, your Honor.
17   THE COURT: And do we have any time limitations,
18 people who have to be on a plane somewhere?
19   MR. DALY: Not really, your Honor, from my
20 perspective.
21   MR. LAVINE: Not until tomorrow night.
22   THE COURT: I've got that time limitation. We will
23 not be here Friday evening. But, in any event, let's get going
24 on the statistics. We're going to start with Professor Duggan,
25 or Dr. Duggan, whatever we're calling him, and he should get up

2 (Pages 2 to 5)

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1 first. The government should put him on. He should explain
2 the methodology to me. I don't want to start with cross
3 because I don't understand it well enough. This is a tutorial
4 to help me understand it, and then you can cross.
5   Do you have any idea how long it will take you to put
6 him on?
7   MR. HENDERSON: Your Honor, I'll turn it over to
8 Mr. Lavine, who will be handling the Daubert hearing.
9   THE COURT: Mr. Lavine.
10   MR. LAVINE: Judge, it may take -- two hours would get
11 us through in fairly detailed fashion his methodology.
12   THE COURT: Good.
13   MR. DALY: Your Honor, I was thinking that it might
14 benefit the Court if we had some brief opening remarks just to
15 put what it is that we're attacking and not attacking into
16 context, so I had --
17   THE COURT: That's terrific, if you want to, although
18 understand that I did plod my way through the briefs, not the
19 gazillion-page expert report, but I did go through the briefs.
20 So I don't want a really long one, maybe just to highlight it,
21 five or ten minutes a side? Does that make some sense?
22   MR. DALY: Certainly, your Honor.
23   THE COURT: Would you want to do that?
24   MR. LAVINE: Sure, Judge. I can get through in just a
25 few minutes to let you know the key points that we --

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1   THE COURT: Well, since it's actually their motion,
2 the question -- well, why don't you go first, and they can go
3 second, of what you're planning on presenting, almost like an
4 opening, and then what you're planning on focusing on, and then
5 we can get into the testimony.
6   MR. LAVINE: Thank you, Judge.
7   There is five key points that we'd like to demonstrate
8 to the Court in connection with this hearing, that, first of
9 all, using nonrandom samples are a tried and true method that
10 are routinely admitted into evidence and used in peer-reviewed
11 publications. We see many references to it. Even in the
12 Reference Manual For Scientific Evidence, they directly discuss
13 the use of nonrandom samples. The key question is the same
14 whether the selection of the sample is random or nonrandom: Is
15 the sample sufficiently representative of the universe to allow
16 for a reliable extrapolation? So we'll show that nonrandom
17 samples are routinely used and admitted into evidence.
18   Number two, that the linchpins of Abbott's motion,
19 this idea that Dr. Duggan, and I quote, "did nothing at all" to
20 evaluate the representativeness of the sample, and that he
21 extrapolated using no data whatsoever, is just completely
22 wrong, a hundred percent directly refuted by the plain facts in
23 the case. Dr. Duggan has considered dozens of different
24 factors to evaluate the suitability of the samples. He's
25 tested his methodology in many different ways, and he only

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1 extrapolated in situations where he had reliable, verifiable
2 data rooted in actual paid Medicaid claims.
3   Third is that although we're not here to evaluate
4 whether Dr. Duggan reached the correct solution, the correct
5 answer, because Daubert we're looking at reliability, not the
6 right or wrong, the test that Dr. Duggan has performed, his
7 large sample size, his examination of the data and the
8 suitability and the representativeness, the way he made his
9 different adjustments and the different tests for robustness,
10 have demonstrated that he is right on target, thereby
11 demonstrating that he has used a reliable methodology. In
12 general, his tests have shown an exactitude to within just a
13 few percent of the actual number he's provided in his report.
14   Next, everything that Dr. Duggan has done is
15 transparent. You're able to see everything that he's done in
16 his work papers. And all of his work is replicable, has in
17 fact been replicated by Abbott. And all of his work is
18 testable. Dr. Duggan has done many tests to evaluate the
19 precision of the work that he's done, as compared to Abbott;
20 they have not actually tested it. But it was fully testable.
21 If they had chosen to do so, they could have tested it.
22   And, last, your Honor, Abbott's nonsystematic
23 cherry-picked counterexamples are just extremely weak evidence
24 for the points that they're trying to put forth here. This is
25 a universe covering millions and millions of claims over eleven

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1 years, over fifty different public healthcare programs,
2 forty-four different NDCs. You can find an example of almost
3 anything. To evaluate whether or not the samples were
4 representative, you need to do a systematic review. You need
5 to look at the overall makeup of the sample and the overall
6 makeup of the population, and zeroing in on cherry-picked
7 counterexamples just sheds very little light on that.
8   THE COURT: Let me ask you this. The thought occurred
9 to me as I was wading through this very dense discussion: Why
10 can't the government, if there's a false claim, just go on
11 penalties? Why am I trying to figure this out?
12   MR. LAVINE: Well, we always try to start --
13   THE COURT: In other words, you get $5,000 to $11,000
14 per claim, right?
15   MR. LAVINE: Yes. We have some pretty solid evidence
16 where Abbott -- because Abbott ran their own pharmacies, and we
17 have calculated they submitted enough claims to generate just
18 from their own formula.
19   THE COURT: So you're saying you don't get the -- it's
20 a False Claims Act case, right?
21   MR. LAVINE: Yes.
22   THE COURT: So for every claim there's a penalty,
23 right, a false claim that they caused to be produced, right?
24   MR. LAVINE: Yes. I completely agree.
25   THE COURT: If I'm understanding it. This is so

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1   complex that I was sort of wondering why you didn't just rely
2   on the penalty provision.
3   MR. LAVINE: Well, it just seemed to be a reasonable
4   approach to try to calculate the damages.
5   THE COURT: But does it matter?
6   MR. LAVINE: Dr. Duggan was able to --
7   THE COURT: Excuse me. Does it matter? In other
8   words, is there a dollar difference?
9   MR. LAVINE: Well, sure. Our individual -- our single
10 damage calculations are approximately $106.5 million.
11   THE COURT: So what would it be if it was a penalty?
12   MR. LAVINE: The penalties associated with the claims
13 that tie to that $106 million in damages would be extremely
14 high. I haven't actually calculated that because I know it's
15 billions of dollars, and we have tried to focus a little bit
16 too in the penalty side on -- because Abbott had their own
17 pharmacy and submitted claims directly to Medicare and Medicaid
18 for these drugs, just those claims would be 350 --
19   THE COURT: The second question I didn't understand
20 based on all the papers, and I should have, I'm sure -- I was
21 often reading them at night -- so there are claims of
22 spoliation. Is any of the data that we're talking about here,
23 when he says he only does ten states instead of the remaining
24 states, is that because the data didn't exist, or is it because
25 he just chose to do ten states? If I told him to do every

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1   single state, is the data there?
2   MR. LAVINE: We were able to collect directly from the
3   states data from approximately thirty states.
4   THE COURT: So for thirty states, you could actually
5   do this state by state?
6   MR. LAVINE: Yes, except the effort involved with
7   mastering the nuances of the data sets of each of these
8   individual states, it's quite extensive.
9   THE COURT: I understand, but we are talking about
10 billions of dollars, so I'm just trying to understand.
11   MR. LAVINE: Sure.
12   THE COURT: So I want to understand what you have and
13 you don't have. You have data. Is that the SDUD data?
14   MR. LAVINE: There's three types of data.
15   THE COURT: Yes.
16   MR. LAVINE: We have the data collected directly from
17 the states.
18   THE COURT: And that's called what?
19   MR. LAVINE: The state-produced data.
20   THE COURT: That's just called state-produced data.
21   MR. LAVINE: Right.
22   THE COURT: And you have that for how many states?
23   MR. LAVINE: Approximately thirty.
24   THE COURT: And for most quarters, or does it depend
25 on the state?

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1   MR. LAVINE: It depends on the state.
2   THE COURT: All right. And you have that for thirty?
3   MR. LAVINE: Approximately.
4   THE COURT: Okay. And then --
5   MR. LAVINE: The next level of data is, in the
6   ordinary course of the operation of the Medicaid program, each
7   individual state reported their drug reimbursement information
8   to the Medicare -- I'm sorry -- to CMS.
9   THE COURT: Right.
10   MR. LAVINE: And we have that data that covers all
11 fifty states.
12   THE COURT: And that's what?
13   MR. LAVINE: There's two types of data that do that.
14 One is called SMRF, S-M-R-F, or SMRF/MAX.
15   THE COURT: Like the little blue guys who run around?
16   MR. LAVINE: Right.
17   THE COURT: All right, so SMRF/MAX and --
18   MR. LAVINE: And then the third set is called SDUD,
19 S-D-U-D, the State Drug Utilization Data.
20   THE COURT: And I couldn't figure out what the
21 difference between those two was. It wasn't clearly explained.
22   MR. LAVINE: Well, the SMRF/MAX data is claim-by-claim
23 data. You can see a single prescription, the amount billed and
24 paid.
25   THE COURT: And we have that for all fifty states,

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1   right?
2   MR. LAVINE: Well, not for every time period, but the
3   combination of the three types of data gives us data for all
4   fifty states. And if Dr. Duggan didn't have at least one of
5   those three sources, he of course did not calculate any
6   damages. He would only calculate damages if --
7   THE COURT: So SDUD is -- so SMRF is for how many
8   states do you have it?
9   MR. LAVINE: The SDUD and the SMRF/MAX both cover all
10 fifty states.
11   THE COURT: And is that all he really needs to
12 calculate?
13   MR. LAVINE: Well, what he did was to focus on the
14 claim-by-claim data from the states to do his most detailed
15 analysis, and then extrapolated using the SMRF/MAX and the SDUD
16 data.
17   THE COURT: All right, that's what he's going to tell
18 me about?
19   MR. LAVINE: Right, right. And that's why we say he
20 had data underlying every penny of the damages because the SDUD
21 and the SMRF/MAX reflect actual Medicaid claims paid by the
22 state.
23   THE COURT: So when Abbott and the others complain
24 about spoliation, that's the first category of state-produced
25 data?

4 (Pages 10 to 13)

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1   MR. LAVINE: Yes.
2   THE COURT: You have everything else?
3   MR. LAVINE: There are theories along the line because
4 we --
5   THE COURT: No, I understand, but it's the first
6 category of the three, that's what's not there?
7   MR. LAVINE: Yes, right.
8   THE COURT: The second two categories exist?
9   MR. LAVINE: Yes, but, again, and there's charts in
10 the expert report that show --
11   THE COURT: Yes, but the expert is like this, okay?
12   MR. LAVINE: Right, I understand.
13   THE COURT: Okay, so let's --
14   MR. LAVINE: But I want to make sure you understand.
15 The data, the SDUD and the SMRF/MAX, for example, might not
16 cover a certain state for a certain period, or the SMRF data
17 might and the SDUD doesn't. It's the combination of the three
18 databases that was used by Dr. Duggan, where he could use one
19 to check on the other, and only did calculations if he had at
20 least one of those sources.
21   THE COURT: All right. Well, I'll ask him about that.
22 Thank you, thank you.
23   All right, so from Abbott's point of view?
24   MR. DALY: Your Honor, to pick up where you left off,
25 our problem with the data that we're raising is that the claims

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1 data, the state-produced data, he only had for ten states.
2 That's the data that brings you down to the transaction level
3 that actually allows you to look at the transaction and
4 determine what the dispensing fee was, how much was paid, how
5 much was charged, whether it was a U and C, whether there was a
6 MAC, et cetera, et cetera, et cetera.
7   Our problem that we raise with respect to Dr. Duggan
8 on the one hand and spoliation on the other is that there's
9 only ten states of it that they used in the expert analysis.
10 There may be as many as twenty or twenty-five -- I don't think
11 it's thirty -- states where the data was available.
12   THE COURT: Where the data --
13   MR. DALY: The claims data, the state-produced claims
14 data was available.
15   THE COURT: For thirty states?
16   MR. DALY: I don't think it was quite thirty. It was
17 more like twenty or twenty-five. But the point is that
18 Dr. Duggan didn't use it. He only used ten. And when you move
19 to the extrapolation, the SDUD data and the SMRF data, that's
20 simply aggregate data, so --
21   THE COURT: But you've had access to the state data,
22 though, right?
23   MR. DALY: We did. In fact, some of the stuff that
24 Dr. Duggan used is stuff that we got pursuant to subpoena.
25   THE COURT: So you both have similar access to the

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1 thirty states of the claim-by-claim?
2   MR. DALY: Yes, and they decided not to prove up their
3 case on a state-by-state basis.
4   THE COURT: But you've had access to it, in other
5 words, to discredit it, is that right?
6   MR. DALY: Well, in certain circumstances, yes, Judge.
7   THE COURT: All right, so you've both had access to
8 the first category, the claim-by-claim, right?
9   MR. DALY: Well, except for that it's gone, Judge.
10 Most of the data from the states --
11   THE COURT: I thought you said you had it --
12   MR. DALY: We've got some.
13   THE COURT: -- for thirty states.
14   MR. DALY: Twenty-five or so. But they have it too.
15 We all have that. We all have that.
16   THE COURT: All right, for thirty states, you all have
17 it. What's missing are twenty states.
18   MR. DALY: Correct.
19   THE COURT: All right, and maybe the District of
20 Columbia, I don't know. So, all right, and then you all have
21 the data with respect to the aggregate that's at CMS, right?
22   MR. DALY: Right.
23   THE COURT: And you say that you need to go into the
24 weeds with respect to the thirty states?
25   MR. DALY: Yes, Judge, and because what Dr. Duggan

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1 does and what the government does is, they take the detailed
2 analysis of the ten states, and then they extrapolate that to
3 the other thirty-eight. And what they use is the SDUD and the
4 SMRF data. The SDUD and the SMRF data is aggregate. So what
5 they do is, they say: Okay, here's my ten states, the only
6 ones I care about, and I'm going to go ahead and look at these
7 states. And instead of doing any state-by-state analysis for
8 the other thirty-eight, I'm going to take my ratio of
9 difference for these states, and I'm going to extrapolate it to
10 the SDUD and SMRF data, which is simply aggregate. It tells
11 you quarter by quarter by NDC that, you know, Oklahoma spent
12 $500,000 on vanco. And so they take this ratio that they
13 calculated based on the ten states, and they apply it to the
14 other without actually looking at the claim data, without
15 looking to see whether there are MACs involved, the U and C
16 charges, without looking at the state's formula, because the
17 SDUD data and the SMRF data don't allow you to do that. And
18 perhaps the best proof of that --
19   THE COURT: Well, you gave me a very good example, but
20 you gave me one or two. So the question is, have your experts
21 looked at it to show that those are -- looked at another state
22 or another five states, since you had it too, to show that --
23   MR. DALY: We have --
24   THE COURT: I mean, it is cherry-picked. Now, maybe
25 it's representative or maybe it's not, but it was hard to tell

5 (Pages 14 to 17)

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1   from the brief.
2   MR. DALY: We have done a variety of examples that our
3   experts are going to talk to you about.
4   THE COURT: All right, so that's what I'll be hearing,
5   whether or not those cherry-picked examples, which make your
6   point, are idiosyncratic or whether they're representative.
7   MR. DALY: Right, and they're not. And some of the
8   examples come from Dr. Duggan's own work, so we'll be using
9   stuff that he discovered that basically show the point of the
10   extensive variation and variability between states. I mean, he
11   calculates ratios of difference for the same NDC, for the same
12   drug, for the same quarter. In one state it might be a
13   3 percent difference that he charges as damages to us. In
14   another state it might be 90 percent.
15   THE COURT: So can I ask you the other question I
16   started him off with?
17   MR. DALY: Sure.
18   THE COURT: If you win, you know, other than in these
19   10 states, isn't it apparent victory because I don't then just
20   apply a penalty per claim?
21   MR. DALY: Well, there's a battle to be waged on that,
22   as you might expect, your Honor.
23   THE COURT: Which is what?
24   MR. DALY: What the cases say is that --
25   THE COURT: I mean, even if I went down to $5,000, the

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1   is probably -- I'm just going to read from two sentences from
2   his affidavit that he files, and what he says is that "As I
3   explain in my rebuttal report, quote, 'What I've done is not a
4   random sample of the entire universe of fifty states. I chose
5   to focus on the larger states to obtain the maximum amount of
6   precision. Put simply, it is more important to the total value
7   of the damages to be as accurate as possible for the state of
8   Florida than it is in the state of Vermont.'"
9   And so what Dr. Duggan is telling you is that he put
10   more rigor into the 10 states because when he chose his sample,
11   which isn't a random sample -- it isn't any kind of sample at
12   all -- he just wanted to look at the big states, and he didn't
13   care very much about Vermont and New Hampshire and Oklahoma.
14   THE COURT: Well, have you done an analysis of Vermont
15   and New Hampshire and Texas?
16   MR. DALY: I don't know that we have the data for
17   that. There's information about Texas, the point being, he
18   himself says, "I don't have the same degree of rigor on those
19   states because I didn't care about them very much," compared to
20   a big state like Florida or a big state like Illinois. And
21   what we're saying is that if they're going to assess damages --
22   it's their burden to prove damages -- if they're going to
23   assess damages against us, the dollar that Abbott has to pay,
24   if it comes to that, for Vermont is just as valuable as the
25   dollar for Florida, and it ought to be having the same rigor.

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1   lowest range, it's still doing better than the difference.
2   MR. DALY: Well, we don't know that because what the
3   cases say, Judge, in an FCA claim is that the penalties are
4   assessed not on claims, not by claims filed by doctors, but on
5   the defendants' acts. So what the cases have come out, the
6   state cases that we've looked at that your Honor is aware of
7   that have been decided, what the courts have done there is,
8   they don't look at every claim that was submitted by a third
9   party. They look at the defendants' acts, and the defendants'
10   acts are, allegedly, the submission of prices to the compendia;
11   and that may happen once a quarter, or it might happen once a
12   year. So that's why --
13   THE COURT: Oh, I see. So that's the debate --
14   MR. DALY: That's why the government is not --
15   THE COURT: -- whether you get a one $11,000 hit or
16   whether you get it per claim.
17   MR. DALY: Correct.
18   THE COURT: And that's why it's worth it to go through
19   this exercise because there's at least some legal confusion
20   about what I'd look at.
21   MR. DALY: Yes, your Honor.
22   THE COURT: All right.
23   MR. DALY: There will be a dispute on that, but, yes.
24   THE COURT: Okay.
25   MR. DALY: And our problem with what Dr. Duggan does

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1   THE COURT: Take New York and Vermont which are
2   adjacent to each other, I mean, why wouldn't it be reasonable
3   to say, assuming that their regulatory schemes are similar,
4   that you could extrapolate from one to the other?
5   MR. DALY: Well, interesting question, and we'll get
6   into that, but the OIG and Dr. Duggan himself have seen in the
7   work that he's done that the same states with the exact same
8   exact formula -- let's call it AWP minus 10 -- can have wildly
9   different reimbursements by NDC, by quarter. So you have the
10   same state AWP. One state, he calculates a 30 percent
11   DIFF-FRAC, he calls it, or a ratio of difference; and the state
12   with, you know, two over that has AWP minus 10, they're
13   calculating it at 80 or 90. So the fact that a state has the
14   same formula doesn't mean anything, and there are OIG studies
15   which we'll get into very briefly as well which go into this in
16   great detail.
17   THE COURT: All right, but let me ask you, has your
18   expert done a study that shows that it's completely out of
19   whack comparing the average of these ten, if that's what it is,
20   with, let's say, some of the other states?
21   MR. DALY: Yes, your Honor.
22   THE COURT: Okay, I shouldn't have said "out of whack."
23   I guess that's a --
24   MR. DALY: Well, no, I do that all the time.
25   THE COURT: "Out of whack" might have a -- but,

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1 anyway, so you're going to tell me about that.
2   MR. DALY: Yes.
3   THE COURT: All right.
4   MR. DALY: And so just to talk a minute about
5 extrapolation, there's two kinds of extrapolation going on here
6 when we talk about Medicaid; and even for the 10 states that
7 Dr. Duggan has, he does not have data for all the years, even
8 for those states. And so you'll see we'll have charts --
9   THE COURT: Yes, but that's less hard for me. I mean,
10 you know, this question of if you've got ten quarters, can you
11 extrapolate to the next fifteen, that's less hard than across
12 states.
13   MR. DALY: Well, okay, and I think that there are
14 gradations of reliability here. But in that, if you take
15 Michigan, for example, which is one of the 10 states that he
16 uses, he only has five quarters, and those are 2001 and the
17 last quarter of the year 2000. And he extrapolates those five
18 quarters ten years back all the way to 1991, and so you've got
19 basically nine years of the damage period being extrapolated
20 from the very most recent five quarters. And what you end up
21 with -- so there's an example --
22   THE COURT: You know, actually, I really don't want to
23 take up too much more time. I read your briefs. I mean, so
24 the four kinds of extrapolation, are we talking about, is
25 extrapolation across states?

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1   MR. DALY: Yes.
2   THE COURT: Extrapolation within states, right?
3   MR. DALY: Yes.
4   THE COURT: There's extrapolation across carriers, and
5 there's extrapolation within carriers, right?
6   MR. DALY: Exactly.
7   THE COURT: All right, so those are the four things
8 that you're challenging?
9   MR. DALY: Yes, your Honor.
10   THE COURT: Is there anything else you're challenging?
11   MR. DALY: No, your Honor, and I did want to point out
12 that when you get into Dr. Duggan's numbers -- so we're not
13 challenging a lot here. The states where he has the data
14 before he does the in-state extrapolation, we're not
15 challenging that. There's no Daubert challenge. We have a lot
16 to say about that on the merits at trial, but for Daubert,
17 we're fine with that. We challenge the in-state and then the
18 across-state.
19   The same thing on the carriers. Where he has the four
20 or five carriers where he has the arrays, even when he doesn't
21 have arrays for every J-Code that he's calculated, we're not
22 challenging those. And in each case it ends up being about
23 50 percent of the damages for Medicare and 50 percent of the
24 damages for Medicaid. And I wanted to make that point because
25 we're not challenging everything. We're only challenging that

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1 which we feel has gone beyond the data, and that's our point
2 here.
3   THE COURT: And you're not challenging his
4 qualifications?
5   MR. DALY: No, your Honor.
6   THE COURT: Okay, good. Let's hear from him.
7   MR. DALY: Thank you.
8   MR. LAVINE: Your Honor, may I take one minute to
9 respond?
10   THE COURT: No. Let's just do it. All right, I'm
11 sure he's a busy man, right? He's taking care of the whole
12 Healthcare Bill, so let's get him out of here, all right,
13 because I'm hoping here, it's 2:35, you're going to take two
14 hours, is that it?
15   MR. LAVINE: Probably.
16   THE COURT: So if you can do an hour and a half, and
17 we're going to need to do a break for the Court Reporter, so we
18 just need to move through this.
19   MARK G. DUGGAN
20 having been first duly sworn, was examined and testified as
21 follows:
22   THE CLERK: Would you please state your name and spell
23 it for the record.
24   THE WITNESS: Dr. Mark Gregory Duggan. It's spelled
25 M-a-r-k G-r-e-g-o-r-y D-u-g-g-a-n.

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1 DIRECT EXAMINATION BY MR. LAVINE:
2 Q. Dr. Duggan, just briefly, can you give the Court the
3 benefit of your --
4   THE COURT: I've seen the CV. Let's just get to the
5 merits. He's qualified.
6   MR. LAVINE: All right, thank you.
7 Q. Dr. Duggan, what is your understanding of why we are here
8 today?
9 A. It is a Daubert hearing, and that there are certain
10 components of my analysis that Abbott and Abbott counsel are
11 challenging, and I'm here to discuss the reliability, the
12 validity of the methodology that I deploy in my analyses.
13   THE COURT: Let me ask you this: Have you ever
14 testified before?
15   THE WITNESS: I have not.
16   THE COURT: All right, so sit back, relax. All right,
17 so the key is -- do you teach undergraduates at Maryland?
18   THE WITNESS: I do.
19   THE COURT: All right, I'm an undergraduate for this
20 purpose, so when you're starting to talk statistical concepts,
21 I had one undergraduate course in statistics, so if you can
22 break it down and talk to me more than you do the lawyers.
23   THE WITNESS: Okay, and look at you.
24   THE COURT: Yes, you're teaching me what happened
25 here, all right?

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1   THE WITNESS: Okay.
2 Q. What is your understanding of the key critiques leveled by
3 Abbott at your study, at your analysis?
4 A. I think that they were just described, outlined by counsel
5 to some extent, the notion being that -- I think the criticism
6 being that the extrapolation methodology that I utilize in my
7 analyses is unreliable and not valid; it's at a high level.
8 Q. And in particular, what is your understanding with respect
9 to the data?
10 A. Well, my reading of the various documents that they've
11 submitted and their experts have submitted indicates that they
12 have a sense that I'm extrapolating to periods or products or
13 states and what have you for which I have no data. And in this
14 report, your Honor, you may have seen that I deploy quite a lot
15 of data, and I think that is flat out wrong.
16 Q. And then in connection with the representativeness of the
17 sample, what is your understanding of the particular point
18 they've leveled there?
19 A. Well, once again, my reading, sort of aggregating up all
20 of the documents and so forth, is that Abbott and Abbott
21 counsel are claiming that I've done really nothing to gauge the
22 appropriateness of taking results for this very large sample of
23 claims to estimate what the corresponding "difference," as I
24 call it in the report, and I can define that later, would be in
25 this group of claims that are outside of the sample.

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1 Q. So do you agree or disagree that you did nothing and
2 extrapolated with no data?
3 A. I disagree.
4 Q. And can you characterize the thoroughness of the work that
5 you performed.
6   THE COURT: No. Let's just explain it. What did you
7 do?
8 Q. Well, what were you asked to do?
9 A. In my judgment, having done years and years of work on
10 Medicaid/Medicare and similar sorts of government programs,
11 healthcare issues, I did an enormous amount to assess the
12 validity of this methodology, and I can -- I don't know when we
13 want to sort of drill down.
14   THE COURT: Now.
15   THE WITNESS: Okay.
16   THE COURT: So start really with baby steps. What
17 data? What did you do? What was the methodology?
18   THE WITNESS: Okay, great. So two programs at issue
19 that I'm analyzing really in this report, the Medicaid program
20 and the Medicare program. For Medicaid, I utilized three
21 different sets of data, as counsel explained earlier: the
22 state-produced claims data for states like Florida, California,
23 New York and so forth; the CMS claims data for the remaining
24 38 states; and the CMS S-D-U-D data, SDUD data. And just to
25 give you a sense of the sort of level of information that's

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1 contained in these different files, so the state-produced
2 claims data and the CMS-produced claims data are very similar.
3 There are some discrepancies, there are minor discrepancies,
4 but basically there's a claim per -- for the typical
5 prescription that gets dispensed at a pharmacy, a claim is
6 going to appear in both of those data sets, if I have the data
7 for them.
8   The S-D-U-D data, the State Drug Utilization Data, is
9 aggregate data by state, by NDC, by quarter. And so in
10 thinking about what sort of level of information is here --
11   (Discussion off the record.)
12   THE WITNESS: So 50 states, 44 products, 44 quarters,
13 okay. So that's basically, in terms of how many observations
14 are in this data, it's essentially 50 times 44, times 44, which
15 is approximately 100,000.
16   Now, some of those cells will be empty. Maybe Alaska
17 won't have any utilization for a particular product in a
18 certain quarter, but that's to give you a sense of sort of
19 order of magnitude. So while the term "aggregate data," it is
20 aggregate data, it's still at a very fine level. Because it's
21 100,000 different cells on three million claims, it's --
22   THE COURT: A hundred thousand different --
23   THE WITNESS: Cells. When I say cells, I mean like
24 state NDC quarter combinations. And some of those cells, those
25 combinations will be empty, there won't be any claims. But for

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1 many, tens of thousands of them, there are.
2   THE COURT: And is there a difference between the
3 state-produced data and the CMS claims data which you say you
4 have for 38 states?
5   THE WITNESS: There are some differences between the
6 two.
7   THE COURT: Like what?
8   THE WITNESS: So, for example, the units variable that
9 is -- so one of the things, if one's looking, sort of looking
10 at a claim and trying to replicate, how did this methodology
11 arrive at $60 paid, and so the state-produced data does have
12 typically a units field, which can be multiplied by the AWP and
13 then times .9 or .95, depending on the state. So there's a bit
14 more detail in there, a units variable that's included in
15 across the years, things like, typically the dispensing fee is
16 broken out and so forth, so there's a bit more detail in it.
17   But, also, many of the things that are in the claims
18 data are also in the CMS data. So, for example, the paid
19 amount is in both sets of data. The usual and customary, the
20 sort of charged amount, that's in both sets of data. The
21 product is in both sets of data, the state, the quarter. There
22 are many things that are common, but there are a few minor
23 differences.
24   THE COURT: Is the MAC in both, whether there's a MAC
25 used, a maximum allowable cost?

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1   THE WITNESS: No, but to some extent, the MAC would be
2 embedded in the paid amount, but there isn't necessarily a MAC
3 indicator in the SMRF/MAX.
4   THE COURT: Because that's all that -- that's what you
5 pay? That's why it's in the embedded amount?
6   THE WITNESS: That's exactly right, so if there's a
7 MAC of 30 in effect --
8   THE COURT: Could you tell that? In other words, so
9 if you don't have the state -- the state data will give you
10 whether there's a MAC, right?
11   THE WITNESS: Typically, yes.
12   THE COURT: So if you're looking at the federal data,
13 the CMS data, and you don't know whether there's a MAC or not,
14 can you look back to the regulatory scheme to find out whether
15 in fact they're following a MAC. Would you be able to go --
16 for example, Massachusetts in a given year might say, "This is
17 our MAC"?
18   THE WITNESS: Right, so it is possible to back out
19 this kind of information in certain instances, and to the
20 extent that these -- so it's possible, and certainly a look at
21 the adjudication methodologies used by the states can shed some
22 light on this. But, also, to the extent that a state pays a
23 MAC, let's say, that would be less than what would end up from
24 AWP, for example, that will be reflected in the paid amount,
25 and so that is sort of -- I don't know where -- there's so many

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1 elements, so I'll just sort of go into this because I think
2 this is useful.
3   One of the things that I did to assess the
4 comparability of those 10 states for which I used
5 state-produced data to the 38 is, I look: For the 44 products
6 that are at issue in this case, are the average amounts paid
7 per claim comparable between the two groups on average? So is
8 it the case that --
9   THE COURT: Between what two groups?
10   THE WITNESS: The 10 and the 38. And here if you -- I
11 don't know if you have the report in front of you.
12   THE COURT: I don't have it right in front of me.
13   THE WITNESS: Yes, no, that's okay. If not, I can
14 just explain. So there's a period of time when I have the CMS
15 claims data for all of the states, for all of the essentially
16 48, 49 states that are being analyzed; and I can see, is it the
17 case that systematically there's a systematic pattern? Is
18 there a difference in the sense that the 10 states tend to
19 reimburse more per claim than the 38?
20   So it would be -- suppose it were true that I found
21 that on average, the 10 states paid $50 per claim for one of
22 the vanco NDCs, but the remaining 38 states were paying $10 per
23 claim. That would potentially be driven by, those 38 states
24 for whatever reason have much more aggressive MAC programs in
25 effect across the board, right? So this is exactly an example

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1 of the kind of thing that I did to assess the comparability of
2 the two states. It turns out that more often than not -- and
3 this is true even when I pull Ohio from the analysis, which we
4 can talk about -- the average amount paid in the 10 is -- I
5 have to go back to my footnote --
6   MR. LAVINE: Your Honor, I have copies of the report.
7   THE WITNESS: I'm looking at Footnote 45.
8   THE COURT: I am sure I didn't read the footnote.
9   THE WITNESS: Yeah, right, so it's the average
10 reimbursement -- I just don't want to flip it.
11   THE COURT: Well, Which footnote are we talking about?
12   THE WITNESS: It's Footnote 45 on Page 78.
13   MR. LAVINE: Your Honor, No. 1 would be the beginning
14 of the exhibits to the initial report, Tab No. 1.
15   THE COURT: Yes, well, I've got 45.
16   THE WITNESS: Yes, it's in Tab B, I think?
17   THE COURT: Yes, I've got it.
18   THE WITNESS: So it's around Page 78. And so you see
19 there in that footnote I'm describing how basically I'm
20 looking, on a per-claim basis, how does reimbursement, looking
21 for each of the 44 products, differ for those 10, the Floridas
22 and so forth, versus the remaining 38, the Vermonts? And if
23 anything, it appears from this comparison that average
24 reimbursement per claim, it's more often than not it is higher
25 in the remaining 38.

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1   So if I thought, well, you know, those 38, it's just
2 going to be true that they have much more aggressive MAC
3 programs in effect, I would have expected the opposite in a big
4 way. But, you know, it's basically half the time: 24 more
5 often than not, 24 out of 44 cases, and 23 out of 44 when we
6 drop Ohio; the average amount paid is higher in the 38 than in
7 the 10, suggesting it's not true. And you can -- I'm sure
8 there are examples, so --
9   THE COURT: But on the other part, is the drop
10 dramatic? In other words, you seem to think it all works out
11 in the wash.
12   THE WITNESS: Washes out.
13   THE COURT: Some term like that. But if one's only
14 slightly higher -- if the majority is more likely the slightly
15 higher and then the remaining are dramatically lower, what do I
16 do with that?
17   THE WITNESS: I don't have those numbers right here in
18 front of me, but what I can tell you is that those products,
19 those 24 out of 44, account for 75 percent of the spending. So
20 the ones where the 38 appear to be -- you know, I don't want to
21 make a huge amount -- it's just they're on average quite
22 comparable. If anything, it looks like, for more products and
23 for more Medicaid spending, the average amount paid per claim
24 is higher in the remaining 38. And I hope that I'll get a
25 chance today to talk about some analyses that I've done in

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1   recent months going out of samples. So let's go to some of
2   those 38 and see how they're --
3   THE COURT: So but the big difference between the
4   state and CMS data is, you don't get the MACs spelled out and
5   you don't get the differences in dispensing fees fleshed out.
6   Is there anything else that's materially different between the
7   two data seats for our purposes?
8   THE WITNESS: No. Those are the key ones.
9   THE COURT: Those are the two key ones? And so if you
10 have just the CMS claims data and you don't have the state
11 data, that would be the question mark. If you have the state
12 data, you could go back and double-check and find out?
13   THE WITNESS: That's true, yes.
14   THE COURT: So since we have the state data in 30, if
15 we had to, and I know it wouldn't be a joyful task, but if we
16 had to, you could at least analyze 20 more states along the
17 same lines that you've done for the ten?
18   THE WITNESS: And fortunately, I don't know that 20
19 more is -- I think we're in the 20s as opposed to at 30, but
20 fortunately, for the 9 states within the 38 for which we had
21 the most data, I've since done some analysis.
22   THE COURT: I see, so beyond the initial 10?
23   THE WITNESS: That's right.
24   THE COURT: I see.
25   THE WITNESS: And so we can assess that.

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1   THE COURT: All right. I've stopped hijacking your
2   witness. All right, go ahead.
3   MR. LAVINE: Thank you, although I can tell that he
4   wants to continue with that exact point.
5   Q. Describe a little more about the 9 that you were
6   discussing.
7   MR. DALY: Your Honor, I'd like to interpose an
8   objection. The situation is this: Dr. Duggan has -- well, we
9   just got some new analysis that he did last Monday after
10 Thanksgiving. He's already filed four expert reports. He
11 filed an original, he filed a supplement, he filed a rebuttal.
12 He filed an affidavit in support of summary judgment. This
13 hearing has been set for a couple months, and, you know, a week
14 before we're coming in here, we get some new apparently very
15 extensive examination that we've had some opportunity to look
16 at, but by no means the opportunity to dig in and find out what
17 it is that he did.
18   THE COURT: Well, that objection is overruled. If you
19 need a little extra time to have your expert look at it and
20 respond to it, of course I will allow that.
21   MR. DALY: Thank you, Judge.
22 Q. Sorry, go ahead, describe the analysis with respect to the
23 9 and the outcome of that.
24 A. So basically I sort of -- the initial report, and there
25 was a subsequent revision to it, just that revised the numbers

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1   a little bit, sort of I really tried in that initial report to
2   make it very clear where the big number, the 65 or, you know,
3   whatever the large number was, where they were coming from by
4   giving state-by-state summaries and in some cases multiple
5   summaries for each state. And so it is straightforward to look
6   at the initial report and the subsequent revision, the table, a
7   couple of the tables, to see, what did my extrapolation
8   methodology predict for the state of, for example,
9   Pennsylvania? What did it predict for the state of Virginia or
10 Texas and so forth? Because these are states for which I had
11 state-produced claims data but did not -- they weren't included
12 in the original 10. They were not in the original 10, but
13 these new 9, how does the extrapolation methodology fare?
14   So, for example, in the state of Pennsylvania, my
15 extrapolation methodology said 1.2 million, just rounding to
16 the nearest --
17   THE COURT: The difference?
18   THE WITNESS: Yes, the federal difference. My
19 extrapolation methodology said 1.2 million. And here I'm going
20 to round just to the nearest 100,000 so --
21   THE COURT: Sure.
22   THE WITNESS: And the amount doing a claim-by-claim
23 analysis -- that's apples to apples with the ones that I did
24 for the other 10 states -- 1.1. So it was a little higher for
25 that one of the 38.

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1   For Virginia, 0.9 and 0.9.
2   For Texas -- and Texas actually is interesting because
3   that was one of the states that Abbott counsel criticized me a
4   lot for not including them in the original sample -- my
5   methodology yielded 0.9 million, and the claim-by-claim
6   analysis yielded 0.9 million, in fact slightly higher with the
7   claim-by-claim analysis.
8   MR. LAVINE: I'm sorry, Judge, I should have pointed
9   out these numbers are in the last page of Tab E.
10   THE WITNESS: They're in Tab E.
11   THE COURT: All right, give it --
12   MR. DALY: Thank you.
13   THE COURT: This is very useful, but you don't have
14 it, right?
15   MR. DALY: Right.
16   THE COURT: Is this what he got last Monday?
17   MR. LAVINE: Yes. The only materials contained in
18 here are copies of the materials already produced.
19   THE COURT: Do you have an extra one for my law clerk,
20 since you seem to have volumes back there?
21   MR. LAVINE: Sure.
22   THE WITNESS: So should I resume?
23   THE COURT: Yes.
24   THE WITNESS: So here you can see a detailed, the side
25 by side of each of the 9 states. And aggregating across the

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1 9 states, my methodology predicted a federal difference of
2 6.4 million, and the claim-by-claim analysis yielded a
3 difference of 6.0 million, off by 6 percent, approximately
4 6 percent.
5   I will concede that it was a little higher, that my
6 methodology was a little higher than, like, then the amount
7 that is sort of apples to apples with the amounts from those
8 original 10 states, and so I was curious about that, why is
9 that true? So I drilled down a little bit on those
10 9 states, and what I found was that in these 9 states, a little
11 more often -- so if you look between the 38 states and the
12 10 states, the frequency with which the two groups pay usual
13 and customary is almost identical. It's like 24 percent for
14 the first 10, 25 percent or 24 point something percent for the
15 other 38.
16   Why does the usual and customary share matter? Well,
17 the differences tend to be lower on claims where usual and
18 customary is paid, and I think it's best for me to give an
19 example. Suppose a formula suggests 60, but a provider charges
20 40, and my methodology says 15, okay, that if you use the
21 Abbott prices and you plug them into the Medicaid methodology,
22 you get 15, if the usual and customary were higher, then the
23 difference would be 60 minus 15, 45. But if the usual and
24 customary is getting paid, the difference is going to be
25 smaller, 25, a little bit smaller.

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1   And so it turns out that these 9 states pay usual and
2 customary somewhat more than the remaining 29. So part of the
3 reason that I'm off here at all -- I mean, I don't expect it to
4 be exact to the dollar, but part of the reason that I'm off a
5 little appears to be this, this difference between those 9 and
6 the overall 38. But I guess it's useful to know that those
7 remaining 29 look more like the original 10 than these 9, but
8 in any case, it's very much --
9   THE COURT: How do you know that?
10   THE WITNESS: In terms of this dimension of this usual
11 and customary.
12   THE WITNESS: How do you know the remaining -- in
13 other words, why wouldn't it make sense just to shift down your
14 extrapolation 6 percent in all the other --
15   THE WITNESS: Six percent across the board. So I
16 guess there would be a couple ways one could do this. One
17 could say, I'm going to shift down the extrapolation by
18 6 percent, or, alternatively, that instead of using 10, I'm
19 going to use 19 in predicting. So that would end up shifting
20 down the remaining by about 3 percent, if you do sort of a
21 back-of-the-envelope calculation.
22   But suppose even you did the 6 percent, you adjusted
23 down the remaining dollars by 6 percent. So here we're talking
24 about I'm off by about $400,000. If you revised down the
25 remaining amounts by 6 percent, the effect of that is less than

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1 a million. So taken together, it is I think about 1.3 million.
2 It's 0.4 and 0.9 would be the adjustment. So if one were to
3 apply the 6 percent across the board to the remaining 29
4 states, it would lower it by about -- the overall difference
5 from -- and let me just see if I have the --
6   THE COURT: Well, would that be a reliable
7 methodology, to take the 6 percent and apply it across the
8 other states?
9   THE WITNESS: Part of the reason that I drilled down
10 in the way that I did was to see, are these 9 -- it looks like
11 these 9, you know, paid the usual and customary a bit more
12 often than the remaining 29, who actually pay usual and
13 customary less often than the remaining 10. So I still think a
14 more accurate estimate of the total difference for those
15 remaining 38 would be the other number, but it's not -- it
16 wouldn't be -- it would be --
17   THE COURT: Well, would there be a way of going into
18 these other states and seeing whether their usual and customary
19 reflects these additional 9?
20   THE WITNESS: Right, so I think I've actually done --
21   THE COURT: You've done that.
22   THE WITNESS: Yes. So the usual and customary for
23 these 9, the statistic that I recall right here is about
24 27 percent of the time they're paying usual and customary,
25 versus about 24 percent for the first 10, versus less than

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1 24 percent for the remaining 29. But you can see, they're
2 very -- I guess the takeaway for me from this -- and I'll
3 concede that I would have preferred 6.4 and 6.4 in terms of the
4 method, like -- "prefer" isn't the right -- but I would --
5   THE COURT: You would have taken greater academic
6 satisfaction.
7   THE WITNESS: Right, in being exactly on the money,
8 but being within 6 percent, you know, this is a pretty
9 complicated set of data and so forth, it makes -- you know, to
10 me, it really corroborates the methodology that I've deployed.
11   THE COURT: So what about differences in dispensing
12 fees, which was another big point? There were some huge
13 differences.
14   THE WITNESS: In the dispensing fees.
15   THE COURT: That Abbott sort of highlighted.
16   THE WITNESS: Right, so I can -- I can -- it turns out
17 that these sort of enhanced dispensing fees for the 9, so if we
18 look among the 19 states now, the first 10 in these 9, several
19 of them have these sort of enhanced dispensing fees; and the
20 frequency with which those dispensing fees are paid is actually
21 not all that high. So in terms of, does it make a material
22 difference to the analysis, there are going to be instances
23 where it will matter on a claim-by-claim basis; but in a
24 material difference, it's not a big driver of the total
25 difference. So, you know, it is true that -- and that's

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1 something certainly that I looked at, these dispensing and so
2 forth, that they do vary to some extent across the states, but
3 in a systematic common way, not so much, that is reflected in
4 the data.
5   THE COURT: Do you want to pick it up?
6   MR. LAVINE: Yes, Judge.
7 Q. Two quick follow-up points on the data. The SMRF/MAX
8 data, is that claim by claim that shows an individual
9 prescription in each line?
10 A. Yes. Yes, it does, and it's -- yes.
11 Q. So what is the difference between that and the SDUD data?
12 A. The SDUD data, the SMRF/MAX data is very similar to the
13 state-produced claims data. It differs a bit, as we discussed.
14 The SDUD data represents the aggregate number of prescriptions
15 and total amount paid per state in a state NDC quarter
16 combination. And it's helpful, I think -- I don't know, your
17 Honor, if you have the report in front of you, but Tables 26-A
18 and 26-B give a sense of --
19   THE COURT: And this is in what, Tab --
20   THE WITNESS: Under "Reports," this would be in Tab 1.
21   THE COURT: SDUD.
22   THE WITNESS: So here are the 38 states listed in
23 descending order of spending for the complaint products, and
24 you can see in Table 26-A that the amount of SMRF/MAX data used
25 for these 38 states is about 34.5 million, and you can see here

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1 that basically all of the states have data from '99 through
2 2001, with the exception of Tennessee, which was different in
3 other ways. But there are some -- -and then there are many
4 states that go far back. For example, you know, the state of
5 Pennsylvania goes all the way back to 1992 with the SMRF/MAX.
6 But not all of the states have SMRF/MAX data in every year, so
7 on Table 26-B I list the SDUD spending and utilization for the
8 remaining state years. And the latest this data is used is
9 1998 because I have SMRF/MAX always for '99 to '01. But it
10 gives you a sense. We're talking about 13.9 million for the
11 SDUD data and 34.5 million for the SMRF/MAX for these other
12 states.
13   THE COURT: Well, so how do you extrapolate backwards?
14 How do we know that, without even the SMRF/MAX data, that
15 that's reasonable?
16   THE WITNESS: Okay, so what I do in the analysis is,
17 for each NDC quarter combination -- and there are about 2,000
18 NDC quarter combinations because there's 44 products and
19 there's 44 quarters -- I essentially take the average of the
20 10 states for which I have data and use that in these remaining
21 38 states.
22   So just as an example, just to give a sense, suppose
23 that 5 of those states have an average ratio of difference to
24 spending of 70 percent in a particular NDC quarter combination --
25 so this is really, like, this level of detail. It's not like

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1 I'm taking a state aggregate and just applying it to another
2 state aggregate. I'm drilling down to 2,000 separate distinct
3 NDC quarter combinations, taking account of the fact that these
4 spreads grew over time, taking account of the fact that these
5 spreads vary a lot across products, and respecting that
6 variation when I try to predict/estimate what the difference is
7 in another state. And so I take the average of those 10
8 states.
9   Now, admittedly, in certain periods, I don't have data
10 for all 10 states, so there may be certain and many NDC quarter
11 combinations where I only have 9 states or 8 states. But
12 underlying that in each of these NDC quarter combinations are
13 typically thousands of claims for these states. Then I'm using
14 that to predict over -- estimate for this other group. So
15 literally for every state analysis, for all -- I do 38 separate
16 state analyses where I say, how much vanco 653301 does this
17 state have in the fourth quarter of '97, and then I compare
18 apples to apples with the other 10 states, try to use that to
19 estimate that difference ratio.
20   THE COURT: Would you take an average?
21   THE WITNESS: Take an average, I take an average.
22   THE COURT: And then have you spot-checked yourself
23 the way you did with the other set of data?
24   THE WITNESS: No. So that's for the other 38. So
25 there's no need for a extrapolation back with the other 38 in

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1 the sense that I'm using this average of the 10 states to
2 predict for these 38.
3   Now, for the 10 states for which I use state-produced
4 claims data -- now, there are some states where I go back
5 practically to the beginning. I think it's Illinois I have all
6 the way back to '91, quarter two. But there are others where
7 the data turns on later in the period, and so in that instance,
8 what I do -- suppose that we're in a state where the first
9 quarter data is 1996 quarter one, okay? And then for that
10 state we have excellent data, the population of claims for that
11 state in that, say, quarter. And then I calculate the
12 difference-to-spending ratio there. Say it's 70 percent, okay?
13   Now, what I could have done was just apply that
14 backwards, but that wouldn't account for the fact -- and this
15 is especially important going backwards -- that spreads are
16 growing over time. So if I extrapolated back that
17 70 percent, that would overstate the difference on average, in
18 my judgment, because it would not account for the fact that,
19 you know, the spread in '92 was a lot lower than it was in '98.
20 And you can come up with exceptions, but in general it's sort
21 of going back. And so I adjust down. So, for example, suppose
22 the spread was, you know, in that 70 percent example, suppose
23 the spread was only half as high in an earlier period, then I
24 would move that 70 to 35. Now, what's --
25 Q. Is that phenomenon -- I'm sorry -- reflected in the

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1 Figure 1 to your initial exhibit?
2 A. That's exactly right, so I think it's helpful to go to
3 Figure 1. What I'm essentially trying to -- it may even be --
4 it may be more useful to go to Figure 2. This would also be in
5 Tab 1. Do you have the figure in front of you?
6   THE COURT: Yes, I do, yes.
7 A. Okay, so you can see that the published prices are going
8 up, while you can also see that the average transaction prices
9 are falling. So what this extrapolation back in time does is,
10 it accounts for that. And, moreover, if for whatever reason
11 when extrapolating back the spread were bigger, I don't account
12 for that. So I basically say, I'll only adjust it down going
13 back. So if for whatever reason the spread a year earlier was
14 a bit higher, I basically take the minimum of whatever -- so
15 I'm basically, this is accounting for this method.
16   Now, how do I probe the validity of this? And I describe
17 this in my rebuttal report. I essentially pretend for each
18 state that my data started a quarter later than it actually
19 did. And what I find when I do that is that the difference
20 using the extrapolation is lower aggregated across the states
21 than it is when I use the state claims-by-claims data,
22 consistent with the notion that it's -- essentially it's in a
23 sense conservative. It can only adjust down that difference
24 going back in time. I don't ever adjust it up, and consistent
25 with that, the pattern is that it is, if anything, having more

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1 state-produced data would lead to a higher difference.
2   THE COURT: When do MACs kick in in most states? Are
3 MACs even a factor in trying to understand this early on?
4   THE WITNESS: They become a bit more of an issue later
5 in the period, and they're certainly an issue in Ohio, but Ohio
6 wasn't in the ultimate analysis. But during this time period
7 for this set of products -- and, once again, there are examples
8 and there are cases, but systematically this is not, for these
9 products, it's not -- I don't have the number off the top of my
10 head, but what I can say is that to the extent that MACs are
11 being paid, that will be reflected in a lower difference. And
12 so that, you know, my analysis -- ultimately, you know, I have
13 this analysis that drills down the states-produced claims data,
14 uses the results from that. Really, and at some level I'm
15 using data for almost 2 million claims to form these 2,000 NDC
16 quarter averages, and then for every one of the 38 states, you
17 know, basically lining up their utilization for those 2,000 NDC
18 quarter averages and predicting and estimating what the
19 difference will be. So I'm leveraging an incredible amount of
20 data in this sample, which has, you know, almost 2 million
21 claims to estimate difference in a sample with less than a
22 million claims going across the states.
23   THE COURT: How much -- your sample had 2 million, and
24 the other states had how many?
25   THE WITNESS: 890,000.

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1   THE COURT: For all the other?
2   THE WITNESS: Other 38.
3   THE COURT: Excuse me. So the 2 million are for the
4 10 states, and the other 38 are the 890,000?
5   THE WITNESS: Yes, that's right. And I'm just looking
6 at the most recent one, so Table 35 behind Tab 2 -- Table 25, I
7 mean, behind Tab 2 gives you a sense of this.
8   THE COURT: Wait a minute. I just want to make sure
9 I've got that right. Table 35.
10   THE WITNESS: No, I'm sorry, Table 25 behind Tab 2.
11 It's the first page behind Tab 2.
12   THE COURT: All right, I was in the wrong location.
13 Okay.
14   THE WITNESS: So if you look at that first row there,
15 the total for the first set of states, 2.1 million claims.
16 It's a bit lower because some of them are SMRF/MAX, some are
17 SDUD, but if you aggregate it up, it's in the neighborhood of
18 1.8 million.
19   THE COURT: No, I'm not seeing. Where are you
20 pointing to?
21   THE WITNESS: So the third-to-last row, total for
22 first 11 states, if you look at the number --
23   MR. DALY: Third to last up and down, Judge.
24   THE WITNESS: Third to last from the bottom.
25   THE COURT: Oh, from the bottom. I'm sorry.

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1   THE WITNESS: Yes, that's okay. And so you see the
2 column that says "Number of Claims," you see 2.1 million for
3 the first 11 states. So here I would want to subtract out
4 Indiana, which is about 200,000. And, you know, when thinking
5 about this, so that brings us down to around 1.9, but, in any
6 case, you can see that the number of claims in this initial
7 10 states is about twice as high as the number in the remaining
8 38. And so I'm leveraging an incredible amount of data to form
9 an estimate of this ratio of difference to spending.
10 Q. How does that compare to the size of a more common sample
11 that you might deal with or have seen?
12 A. Well, I think that there are many cases where a much
13 smaller sample is used to try to learn something about an
14 economywide or marketwide phenomena. So, you know, if you
15 think of Gallup polls that are trying to predict what fraction
16 of people are going to vote for President, those are often in
17 the neighborhood of 1,000 to 2,000. But closer to this kind of
18 thing, suppose one -- there's a recent study by -- Gruber and
19 Rodriguez set out to answer the question, how much uncompensated
20 care do physicians provide in the U.S.? And they used a sample
21 of about 4,000 physicians in their analysis to learn something
22 about how much uncompensated care nationally is provided by
23 several hundred thousand physicians. So the ratio, they're
24 leveraging -- for every one physician in their sample, there
25 are, I think, 150 or so physicians outside of their sample, and

13 (Pages 46 to 49)

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1 there are big differences between their sample and the
2 population of physicians. So, in any case -- and this is a
3 study that was published in the Journal of Health Economics,
4 which is the leading journal in the field of health economics,
5 and it's a very highly regarded study.
6   THE COURT: I think we should keep going till about
7 3:30 and take a break.
8   MR. LAVINE: Sure.
9   THE COURT: Unfortunately for you all, I've been on
10 trial since 9:00, so I think I'll take a break for fifteen
11 minutes.
12   MR. LAVINE: I think we're covering a lot of ground,
13 so it would be helpful to take a break to reorganize anyway.
14 Q. I want to bring you back to the SDUD data again. Have you
15 ever used the SDUD data before in your research?
16 A. I have. In one of the papers listed in my CV, in the
17 Quarterly Journal of Economics, I use that data with -- it's a
18 coauthored paper with Fiona Scott-Morton in 2006 to look at
19 pharmaceutical prices in the U.S. and the fraction of --
20   THE COURT: Didn't she represent --
21   THE WITNESS: Yes.
22   THE COURT: -- Schering? She was in the Track One
23 trial, I think, right?
24   MR. HENDERSON: She testified at the tutorial.
25   THE COURT: She did the tutorial. Yes, I remember

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1 her. It's just an unusual first name, if nothing else, so --
2   THE WITNESS: Right.
3   THE COURT: All right.
4 A. So in that study, we set out to estimate the effect of
5 Medicaid reimbursement rules on pharmaceutical prices
6 generally, and we used the SDU data for that. And that was the
7 lead article. The QJE is I think the most highly cited e-con
8 journal. Like, for us, that was a great publication. It's
9 been a paper that I think has people -- I think people have
10 liked it a fair amount. I think it's a pretty highly regarded
11 study. It is a well-regarded study.
12   It's also interesting because it illustrates in that
13 analysis, how did we form our sample? Well, we focused on the
14 top 200 selling drugs in the U.S., and, coincidentally, those
15 200 drugs accounted for about two-thirds of drug spending in
16 the U.S., and --
17   THE COURT: Are they branded or generics?
18   THE WITNESS: They're branded drugs. And so it's an
19 interesting study because it illustrates both the value of this
20 SDUD data and also this notion of focusing on the big, whether
21 it's in this case drugs in the current setting states, the
22 observations that are disproportionately important and trying
23 to infer something marketwide. And so it is -- yes, so that's
24 in one example. I've used the data for other work as well, but
25 that's certainly the one where it's very at the center of the

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1 analysis.
2 Q. And the journal it was published in?
3 A. The Quarterly Journal of Economics.
4 Q. In a peer-reviewed --
5 A. Peer-reviewed journal, and it was the lead article in
6 February of 2006, so at Page 1 to 31. So that was, you know,
7 it is a study that -- and it inspired us to do more work on
8 Medicare Part D and other things, but it's a -- the SDUD data
9 is great, it's terrific. It's incredibly useful data.
10 Q. Can you go back to your Figure 2 of your original report,
11 the second page after Tab 1. There's a few different things to
12 cover. I don't know if we'll get it in in eight minutes, but
13 just quickly, what is the pink line on here? Because you have
14 it identified as an average price. What is that?
15 A. That is the average price to the pharmacy classes of trade
16 in Abbott's indirect data, transactions that occur through
17 wholesalers and distributors.
18 Q. And for one particular product?
19 A. That's right, for vancomycin, which is actually, at least
20 in terms of Medicaid spending, by far the largest product of
21 the 44.
22 Q. And you said it's limited to pharmacy classes of trade?
23 A. That's correct.
24 Q. Okay, how does that differ from an average for all classes
25 of trade?

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1 A. So in a subsequent table of the report, I sort of show
2 that, sort of to get a sense of how prices vary across the
3 different classes of trade, an inspection of that data reveals
4 that pharmacies tend to pay substantially more than other
5 customers, so about 20 percent more for the retail pharmacy
6 class of trade, for example. There are a few other classes of
7 trade that are included in here, but the big one is the retail
8 pharmacy, and they're about 20 percent more than the average
9 price on average. And so, once again, there will be product
10 quarter combinations where they're less than 20 percent, others
11 where they're more than 20 percent, but on average, they're
12 about 20 percent higher than the all-customer average price.
13 Q. And the averages you used for the pharmacy class of trade,
14 did that account for all discounts and rebates that were
15 offered by Abbott?
16 A. It did not. It excluded some of them. So if one looks
17 at, for example, Table 7, there's this customer rebate that
18 accounts for about 7 percent, that represents about 7 percent
19 of invoice, and that was not subtracted off in that analysis.
20 So it does not account for every single rebate in the --
21 Q. So were you pointing to --
22 A. Table 7.
23 Q. Table 7.
24 A. Yes. So it is. . .
25 Q. Now, so this is the average price. That's not the price

14 (Pages 50 to 53)

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1 you used in your analysis, right? Was that scaled upward?
2 A. That's right, so there's kind of two things to think about
3 here. Pharmacies pay more on average, so by telescoping in on
4 the pharmacy classes of trade, that's going to result in a
5 higher price than using the all-customer average price would.
6 And then on top of that, I scale it by 25 percent. So what
7 that means is that -- let's take a product for which the
8 all-customer average price was 5. That 20 percent higher for
9 the pharmacy would suggest they're paying about 6 on average,
10 and then kick that up another 25 percent brings you to 7 1/2.
11 So there will be exceptions, but basically multiplying the 1.2
12 by 1.25 suggests, you know, in the neighborhood, 40, 45,
13 50 percent higher than the all-customer average price is the
14 price that I'm utilizing in my Medicaid and Medicare analyses.
15 Q. And how does that compare, that scaled-up price, the
16 pharmacy class of trade excluding some of the impacted
17 discounts, the other 25 percent, how does that price compare to
18 the overall -- I'm sorry. The price that we're discussing,
19 it's the pharmacy class of trade, not including the impact of
20 certain discounts and rebates, and then scaled up by
21 25 percent -- can we agree, we'll call that the alternative
22 prices?
23 A. The alternative AWPs?
24 Q. Okay. How does that compare to the overall prices paid by
25 Abbott customers?

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1 A. On average, 40 to 60 percent higher. So 50 percent on
2 average would be about that amount, maybe even a little bit
3 more than that when one accounts for the discount issue that we
4 mentioned. So we're 50 to 60 percent. You know, and I haven't
5 looked at that distribution recently, but basically one can
6 sort of back-of-the-envelope it here. Pharmacies pay about
7 20 percent more. Rebates are about -- so just the pharmacy and
8 the 25 percent kick goes to 150 percent. And then if one
9 further accounts for the fact that I'm not including certain
10 rebates, 55, 60. I just don't have -- the hesitation of
11 adjusting beyond 50, I don't have fresh in my mind how much of
12 those rebates are pharmacy as a share. So but it would adjust
13 it up still further, so in the neighborhood of 50 percent or
14 more.
15 Q. So by the time you scaled upward, does it match up with
16 any specific percentile of Abbott's sales?
17 A. It's in the neighborhood typically of the 95th percentile,
18 and it's helpful -- I mean, I think here --
19   THE COURT: Could you say that in a full sentence.
20   THE WITNESS: So 125 percent of the average pharmacy
21 indirect price is generally in the neighborhood of the
22 95th percentile pharmacy price.
23   THE COURT: 95 percent of its customers are paying
24 that?
25   THE WITNESS: 95 percent are paying that or less;

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1 5 percent are paying that or more. And one of the tables in
2 the report that I think is helpful in assessing this is, if one
3 looks at Table 13-B behind Tab 1, so this is just seeing how
4 does the use of 125 percent of the average pharmacy -- so, your
5 Honor, do you have it?
6   THE COURT: Yes, I've got it, and then we'll finish
7 this and take our break.
8   THE WITNESS: Okay, so the bottom two lines. So I
9 think it's useful to look at the top line. If I were to use
10 the average price for pharmacies, I get a difference in the
11 state of Illinois of about 12.5 million. If instead I used the
12 all-customer price, average all-customer price, the difference
13 would be about 12.8 million, so higher, reflecting the fact
14 that pharmacies tend to pay more. So when you plug in those
15 higher prices into the Medicaid adjudication algorithm, the
16 difference is lower.
17   Then if we just skip the next line and go to the
18 fourth line, the 95th percentile pharmacy price brings it down
19 from 12.5 to about 11.9. But that's almost identical to
20 125 percent of the average pharmacy, which is on the next line,
21 12.0. So this is for the state of Illinois. So you can see
22 this is, I think, a useful way to think about -- there are
23 other ways to summarize it just looking at the price data
24 itself, but this is all these prices. So, once again,
25 44 products, 44 quarters, about 2,000 average prices are being

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1 then used in adjudicating all of these Medicaid claims, about
2 530,000 or 540,000 Medicaid claims; and whether you use the
3 95th percentile or the 125 percent of the average, it's pretty
4 similar.
5   THE COURT: Okay, we'll take our break, fifteen
6 minutes. How much longer do you think you have? We can go off
7 the record on this.
8   (Discussion off the record.)
9   (A recess was taken, 3:30 p.m.)
10   (Discussion off the record.)
11   (Resumed, 3:53 p.m.)
12 BY MR. LAVINE:
13 Q. Dr. Duggan, I wanted to go back to your Figure 2, the one
14 right after Tab 1. Actually, I'm not sure if this will help or
15 not, but I think the chart will help. Can you describe how you
16 considered the issue of differences between states as to
17 whether the ultimate payment was based on a MAC or a U and C
18 and how that affected your analysis?
19 A. Can you repeat?
20 Q. Sure. The impact of the actual payment as adjudicated by
21 the state having been based upon a MAC or a U and C as opposed
22 to an AWP --
23 A. Right.
24 Q. -- that was based upon Abbott's inflated list prices, how
25 did that factor into the way you handled it?

15 (Pages 54 to 57)

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1 A. So in terms of the claim-by-claim analyses that I did in
2 these 10 states, I guess the way to think about what the sort
3 of how my algorithm calculated this difference in each case, it
4 basically took the Abbott transaction price to pharmacies,
5 kicked it up by 25 percent, and often, very, very often that
6 would obviously fall quite a bit below the published AWP in
7 that period.
8   Now, there would be times in which the -- let's say the
9 state was paying -- a claim was being paid on usual and
10 customary, and the usual and customary on a per-unit basis,
11 take, like, '98 when the average price was about 5 and the
12 published AWP was about 70, all right, so there's a discrepancy
13 there of about 64. Suppose that the provider submitted a usual
14 and customary of, I don't know, 30 for that product, then the
15 difference, instead of being 70 minus 6 would be sort of in the
16 neighborhood of 30 minus 6 on a per-unit basis. And to the
17 extent that that happened, you know, so -- and similarly for a
18 MAC, there might be a MAC in effect of 20 or 30 or 40 for that
19 product -- to the extent that that happened, and that happened
20 quite commonly in the 10 states for which I had data, and so I
21 used the information from many, many, many claims, hundreds of
22 thousands of claims for these, you know, almost 2 million
23 claims for these 10 states, the frequency with which usual and
24 customary was being paid, MAC was being paid and so forth, to
25 sort of estimate what the difference would be in these

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1 alternative places. And so I'm not sure if I'm getting at
2 exactly what you're asking, but basically --
3   THE COURT: Well, does usual and customary vary a lot
4 state by state?
5   THE WITNESS: There is a little bit of variation.
6   THE COURT: That's what you told me about before.
7   THE WITNESS: Right, there's some variation. It's not
8 massive but --
9   THE COURT: But that was the 6 percent?
10   THE WITNESS: That is driving part of that 6 percent,
11 and quite plausibly explaining all of it, that there is a
12 little bit of variation from one state to the next in terms of
13 usual and customary, and in the aggregate, the 10 look very
14 similar to the 38.
15   THE COURT: And you could do that, if you had the
16 state-produced data, you could figure it out more precisely and
17 the second set of data, but not just if you had the SDUD data,
18 or whatever you call it.
19   THE WITNESS: The SDUD data, right.
20   THE COURT: The SDUD data.
21   THE WITNESS: The SMRF/MAX you can absolutely do it.
22   THE COURT: Right.
23   THE WITNESS: The SDUD data, to the extent that it's
24 going on, it's going to be reflected in lower amounts paid, so
25 it's to some extent --

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1   THE COURT: You just won't know why?
2   THE WITNESS: Right, that's right. Is it a usual and
3 customary, or is it some other factor in the SDUD data? But
4 that's why I sort of combined the empirical analyses of the
5 millions of claims with an examination of the adjudication
6 methodology that's used by the various states. And, I mean, if
7 there's any part of Medicaid reimbursement, you know, where
8 there's -- there's always differences across states because
9 there are 50 state Medicaid programs, 51 state Medicaid
10 programs the states administer, but the similarity with respect
11 to pharmaceutical reimbursement during this time period is very
12 high. If I were doing this for nursing home reimbursement or
13 the reimbursement of physicians or something else, there is
14 more heterogeneity on those mentioned. But in terms of
15 pharmaceutical reimbursement, the frequency with which states
16 are AWP minus 10 with a dispensing fee, and there are wrinkles
17 also to it, but the examination of the methodology indicates
18 between the 10 and 38 just a great deal of similarity.
19   THE COURT: And do they all have MACs?
20   THE WITNESS: Do they all have MACs? For these 44, I
21 don't believe so during this period, no. But I don't have that
22 particular one at my fingerprints, but I think, as time wore
23 on, states became more and more -- there's kind of two things
24 going on: Does a state have a MAC program or not? Then how
25 many of the -- I think at any point in time, there are 25,000

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1 NDCs being reimbursed by Medicaid. And so whether it applies a
2 MAC to a specific NDC, even if a state has a MAC program in
3 effect, that doesn't mean that it does for these products. So
4 it is not -- there are certainly some states, to the best of my
5 recollection, that do not have MACs for these products during
6 the period.
7 Q. Well, specifically, what was the impact of the lesser-of
8 methodology in connection with this issue?
9 A. Right, so the lesser-of methodology, the states are
10 similar in the sense that if the formula, AWP minus 10 plus a
11 dispensing fee, let's say, generates 60, but the pharmacy
12 charges 40, the state is going to pay the lesser of those two
13 amounts. And so that's one very important respect in which the
14 states are similar on that dimension. So that lesser-of
15 methodology is going to result in a lower difference-to-
16 spending ratio than would result if it was solely driven by the
17 formula. It's going to tend to -- for the claims paid on usual
18 and customary, all else equal, they're going to tend to have
19 lower paid amounts, and so that's going to be reflected in a
20 lower difference. But that's very common. As I said, it's
21 about 24 percent of the time usual and customary is being paid
22 on these 10 versus about 24 or 25 percent in the remaining 38,
23 so it's common.
24 Q. But if the alternative price were higher than the basis of
25 reimbursement, regardless if it was based on a MAC or a usual

16 (Pages 58 to 61)

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1 and customary, would you have calculated any difference in that
2 situation?
3 A.   No. So suppose that the usual and customary in that 1998
4 example, suppose they had submitted, let's say, for this vanco
5 product one unit, an average price of about 5, add that to a
6 dispensing fee of, let's say, 5, so that's a $10 prescription.
7 If the pharmacy had charged $9, zero difference, no difference.
8 And in fact there are a decent number of claims for which there
9 is no difference, and it's actually more common among those
10 claims paid at usual and customary. So if you look at the
11 claims that are paid based on the adjudication, like the AWP
12 minus 5 or 10, those, I mean, not surprisingly looking at this
13 figure, if they're basing reimbursement on AWP, it's pretty
14 much always -- not always, but it's rare that the difference is
15 zero, but for usual and customary, it happens a decent amount.
16 Q.   What is Tab 4 in the materials that you have in front of
17 you?
18 A.   So this is a summary of the adjudication methodologies
19 used by each of the states, and at my direction, Myers &
20 Stauffer compiled this information from a variety of sources,
21 as indicated in the color-coded bars just below the graph. So
22 there's a lot of detail here on how states are reimbursing,
23 and, you know, one can see that the methodologies do change to
24 some extent over time within the states, and that, you know, it
25 provides data on -- am I looking at the right thing? -- it

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1 provides data on the methodology.
2   THE COURT: Do you know how to use this document
3 camera?
4   MR. LAVINE: No. I have not used this, Judge.
5   THE COURT: Robert, will you show them.
6   THE CLERK: It's just an overhead projector. Put the
7 thing on it. It should be on.
8   (Discussion off the record.)
9   THE WITNESS: So this is a detailed description of the
10 adjudication methodologies that were in effect in each of the
11 states during the time period of interest, telling things like
12 what is the estimated acquisition cost, what is the standard
13 dispensing fee and so forth. And there's many components of
14 information here, but I made good use of these in carrying out
15 the analyses that are summarized in my report and in subsequent
16 rebuttal report and so forth.
17   THE COURT: And you are defining usual and customary
18 as what, just the bills charged?
19   THE WITNESS: Yes, how it's coded in the state data
20 varies from one state to the next, but it's essentially the
21 pharmacy-charged amount.
22   THE COURT: And in other cases, since I have so many
23 of these, I learned that they tend to track AWP. Would you not
24 agree with that? In other words --
25   THE WITNESS: They tend to go up.

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1   THE COURT: As AWP goes up.
2   THE WITNESS: It is my recollection actually, I think,
3 that -- so the following statistic would be consistent with
4 that, which is to say usual and customary is paid less often
5 over time, suggesting that it's going up perhaps even a little
6 more. I'm not sure, but certainly I do think that it tended to
7 increase over time despite --
8   THE COURT: It's less than AWP but usually more than
9 the prices that people pay?
10   THE WITNESS: More often than not it's above AWP, what
11 they're submitting as the usual and customary, because more
12 often than not -- because remember I said that about --
13   THE COURT: You would say U and C is usually above
14 AWP?
15   THE WITNESS: It is, in many cases it's above, so
16 because it's a lesser-of methodology that's used, and so the
17 formula, let's say AWP minus 10 in a particular state, that is
18 more often paid than the usual and customary amount. In some
19 cases, some states, the provider may not submit it. It's going
20 to vary.
21   THE COURT: So that's consistent, actually, because if
22 one is U and C, it's not U and C minus 10 percent.
23   THE WITNESS: That's right, that's right. So it could
24 be right at AWP, they could be charging exactly AWP, but it
25 wouldn't be paid, given that. But, as you can imagine, this

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1 was not something that Myers & Stauffer did in an afternoon.
2 This took a considerable amount of research, and they really
3 put an enormous amount of work into this. And then I made good
4 use of this in the analyses in my report and in comparing and
5 sort of assessing the comparability of the initial 10 states
6 with the remaining 38.
7   So, for example, I believe the frequency with which
8 the first 10 used AWP for most of the period, I think eight of
9 the ten used AWP for most of the period, and 30 of the
10 remaining 38 used AWP for most of the period, and it's like the
11 exact same ratio, 80 percent in both cases. So that's an
12 example of the kind of thing that I was able to gauge the
13 comparability of looking across these two different -- across
14 these methodologies.
15   MR. LAVINE: Your Honor, could we have Attachment 4
16 marked for identification, please.
17   THE COURT: Why don't we have this whole binder marked
18 for identification.
19   MR. LAVINE: Oh, I'm sorry, sure, the whole binder. I
20 misinterpreted my colleague's request.
21   THE COURT: It's not been filed separately like this,
22 has it?
23   MR. LAVINE: No. No, the Exhibit 4 was filed as part
24 of our summary judgment exhibit.
25   THE COURT: Yes, I have a crate upstairs, so let's

17 (Pages 62 to 65)

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1 just put this in a succinct form, and we'll mark it 1 for
2 Identification.
3   (Exhibit 1 marked for identification.)
4   THE COURT: All right, let's just pick up speed here,
5 even though I know I've been the one slowing you down.
6 Q. So at some point you concluded that the 10 states were
7 sufficient. How did you decide that they were enough?
8 A. That the 10 states --
9 Q. What types of things did you consider? How did you get to
10 that point?
11 A. Well, there are a number of things that I considered, so
12 these adjudication methodologies, that's one of the things that
13 I considered in assessing this. And, additionally, that
14 comparison of the average paid amount per claim between the two
15 sets of states suggests that they are quite comparable.
16   Additionally, I think it's worth noting that the analyses
17 that I do take into account -- so states are going to differ
18 with respect to which of the 44 products they're reimbursing
19 for, and so the analysis takes that into account by looking
20 within each of these NDC quarter combinations 2,000 different
21 NDC quarter combinations, accounting for the fact that it just
22 may be the case that Vermont doesn't use much vanco, whereas
23 New Hampshire uses a very large share of vanco, like, it
24 accounts for a disproportionate share.
25   So not only did I do a number of things to assess the

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1 comparability of the adjudication methodologies, the paid
2 amounts that resulted and so forth, but similarly, to the
3 extent that there were differences in terms of the pattern
4 across products or the pattern over time, I'm accounting for
5 that because there is definitely heterogeneity on that front.
6 And that's what makes this CMS data so valuable is that I'm
7 not -- you know, I'm basically taking into account these 2,000
8 different sets of heterogeneity, which is, you know, it's a
9 standard thing that is done to adjust for any differences
10 between a sample and the larger population. That's exactly the
11 kind of thing I'm doing. So to the extent they differ, I'm
12 accounting for that with this methodology, but broadly the
13 methodologies are quite similar.
14 Q. Is it common to use nonrandom samples in your field?
15 A. Definitely, and while doing it, to take care, if one wants
16 to infer more about the larger population, to take care that,
17 you know, it's sort of a fundamental issue: Is the sample at
18 hand representative of the larger population? And to the
19 extent that it isn't perfectly representative, you know, there
20 are standard adjustments. That Gruber-Rodriguez paper that I
21 talked about at the outset, for example, they take account of
22 the fact that in their sample they have relatively many from
23 California and relatively few in small practices and so forth,
24 and adjust accordingly to say something about the U.S. as a
25 whole. And again and again people are getting, you know,

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1 economists get data for one firm or a number of firms, or, you
2 know, it's one state or a multiple small number of states, so
3 it is quite common to use nonrandom samples.
4 Q. You're referring to the study entitled "How Much
5 Uncompensated Care Do Doctors Provide"?
6 A. That's right, that's right.
7 Q. What was the basis of the sample that was used in that
8 case? Do you remember?
9 A. So the sample, I think in the U.S. there's on the order of
10 about 600,000 physicians, plus or minus, depending on how you
11 count them. I think that's -- maybe four -- I don't know, it's
12 a large number. In their sample they had about 4,000
13 physicians, and these were physicians that contracted with a
14 particular claims processing company, and so they were using
15 data for a very small share of all physicians to leverage that
16 to say something about physicians in the U.S. as a whole.
17   And, moreover, they didn't have -- in this project, this
18 report, I have an incredible amount of data for this group to
19 which I am extrapolating. I have the CMS SMRF/MAX data, the
20 CMS SDUD data. That is much more than people typically have
21 when extrapolating to a larger population. So in terms of
22 the -- I mean, it's a much smaller sample. In fact, their
23 sample looks much different from the larger population than my
24 sample does.
25   And I think it's fruitful in thinking about this, one can

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1 say, well, it's 10 states; but it's 10 states, it's 44 products
2 and 44 quarters. So at some level, you know, it's up to 20,000
3 different state NDC quarter combinations with many claims
4 underlying them, so a lot of information there.
5 Q. Well, could you have used a random sample in this case?
6 A. So it would have been theoretically possible, but one of
7 the constraints here was the issue of certain states did not
8 produce data. So I think maybe it's Oregon they did not
9 produce data. And so if I had randomly sampled from those
10 3 million claims and an Oregon claim had come up, I would not
11 have been able to use that from the state-produced data.
12   And similarly, the sort of issue here, there's an enormous
13 fixed cost associated with mastering the data sets, the
14 Medicaid data sets, because each state differs with respect to
15 how they code the claims. And so doing each additional state
16 takes an enormous amount of work. And part of what as an
17 economist -- you know, as a trained empirical economist, I've
18 done work with a lot of large-scale data sets -- one has to
19 determine where do you draw the line because one could be
20 engaged in the process of data collection ad infinitum. We can
21 always get more data somehow with so many applications.
22   THE COURT: How much would it cost to do each one of
23 the remaining states that we have the claims-by-claims data
24 for?
25   THE WITNESS: Well, we've done now 9 of them, and

18 (Pages 66 to 69)

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1 these are the 9 that we have the most data for. And so of the
2 remaining, I think like Hawaii, we may have one year of data
3 for Hawaii, so we didn't pay the fixed cost of -- but, you
4 know, it certainly would be possible. It's going to depend.
5 Some states are really straightforward, so you get the data and
6 it's a -- it varies a little bit from one state to the next,
7 but I don't have a good sense right now of the time. But, I
8 mean, part of the reason we went to considerable lengths to
9 sort of -- you know, there was this claim that the
10 extrapolation methodology was not valid, so we subjected it.
11 We said, all right, I'm going to do this analysis to get that
12 state, download that state-level data and do that analysis and
13 subject the data --
14   THE COURT: So if you add in the extra 9 states from
15 the 10, how many claims did you evaluate? I know there were
16 2 million for the first 10.
17   THE WITNESS: Right. So we're talking about. . .
18 Let's see, let me go back to where -- I'll try to do this.
19   In Pennsylvania alone is another, that's 50,000
20 claims; Texas is another 60,000 claims; Virginia is another
21 60,000 claims. So right there, that's 121-70 right there.
22 Connecticut is another 35,000 claims, so 205. Massachusetts is
23 another 39,000, so 245. Maryland is another 70,000, so over
24 300,000. So over 300,000 claims, and then Minnesota, Iowa, and
25 Utah, between 300,000 and 400,000.

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1   THE COURT: So that's 2.4, and then you would subtract
2 those from the ones -- so remaining would be in the vicinity of
3 400 and --
4   THE WITNESS: No, I think remaining would be -- let's
5 say, of the remaining, so in Table 25, 900,000. Let's say
6 there's 350 in the sample of 9 states, 350,000, so remaining,
7 maybe 550 claims for the remaining --
8   THE COURT: That hadn't been analyzed to 2.4 that had
9 basically?
10   THE WITNESS: Yes. So it is -- yes, that's right.
11 Q. I just want to touch on one last Medicaid issue. On the
12 intrastate extrapolations where you take from one year to
13 earlier years in that same state, can you just quickly walk
14 through that, maybe using Michigan where you had five quarters'
15 worth of data?
16 A. Right, so this is the case in which -- I'll just go
17 through it quickly because we did it a little bit. Basically,
18 for each of the 44 products, in Michigan, for example, I would
19 take the difference-to-spending ratio for each product in that
20 first quarter, 2000 quarter four, and then project it
21 backwards, but scaling it only down, only down to account for
22 the fact that the spreads tended to grow over time. So that
23 70 percent ratio for a vancomycin product, let's say, in 2000
24 quarter four, it's going to just walk down to probably
25 40 percent by the beginning of the period because the spreads

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1 then were, instead of like 15 to 1, were more like 8 to 1. So
2 it's going to cut it roughly in half, the --
3 Q. And moving backwards, did you utilize the Myers &
4 Stauffer's methodology summaries that we talked about on
5 Exhibit 4, and did you look at the SDUD and the SMRF/MAX data
6 to see if it was comparable, things like that?
7 A. Absolutely, so I sort of inspected whether and to what
8 extent, looking back in time, it was appropriate to deploy, you
9 know, to use this ratio. And, you know, once again, it's
10 possible there's an example here and an example there, but
11 across the board, the methodologies -- I mean, the neat thing
12 about using those state-specific NDC quarter combinations is
13 that those are going to be the same pharmacies being reimbursed
14 in those earlier periods. So it's a useful, but I certainly
15 did probe that issue.
16 Q. Just to try to cover the rest of the issues, let's switch
17 to Medicare. You did two types of extrapolations there, right?
18 A. Correct.
19 Q. Was all the Medicare data that you utilized claim-by-claim
20 data?
21 A. Yes. In terms of information on spending and number of
22 claims, I combined it with array information, data on arrays.
23 But there was only one data set. There wasn't a state-produced
24 SMRF/MAX/STUD analog. It's just the Medicare claims data.
25 Q. And that is claim-by-claim data?

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1 A. Correct.
2 Q. Okay, no aggregate data there?
3 A. Right.
4 Q. So the issue for the extrapolation related to the arrays
5 on the Medicare side?
6 A. I guess I would -- I mean, I would just say that there are
7 two types of Medicare claims before going to the extrapolation.
8 One type are the DME claims for which I'm not doing an
9 extrapolation. I'm using --
10   THE COURT: Durable medical equipment?
11   THE WITNESS: Right, durable medical equipment, that's
12 right.
13   THE COURT: You're not doing that?
14   THE WITNESS: No, no, I'm using those claims, but I
15 have arrays that cover the period. There's another set of
16 Medicare claims, the Part B claims, the carrier claims, for
17 which I am doing some extrapolation. Those claims are
18 summarized in Table 34. But I do think, your Honor, I think
19 it's helpful to look at Table 34 for a moment.
20   THE COURT: Table 34 is?
21   THE WITNESS: It's behind Tab 1, and it's the summary
22 of Medicare carrier claims. Okay, so do you have that in front
23 of you?
24   THE COURT: Yes. Why don't you put it up on the
25 document camera. We're going to make you high-tech by the end

19 (Pages 70 to 73)

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1 of this hearing.
2   MR. LAVINE: My office is going to make fun of me
3 because I'm supposed to be the high-tech guy.
4   THE WITNESS: This table is, I think, helpful just
5 getting a big picture on the Medicare data. So $185 million in
6 Medicare spending during this eleven-year period on the -- I
7 think it's eleven J-Codes that are listed in the complaint.
8 Okay, so right off the bat, one thing worth noting is that I
9 examined five of the eleven products, which are the first four,
10 70-50, 70-40, 70-30.
11   THE COURT: Where are you looking?
12   THE WITNESS: I'm sorry. The leftmost column of
13 Table 34. Okay, so they're listed there. This table --
14   THE COURT: Oh, you're reading the J-Codes.
15   THE WITNESS: That's right, the J-Codes. So this
16 basically tells you that almost $100 million in the spending
17 was for J 70-50 and about $26 million for J 70-40, and so forth
18 down the line.
19   And so I restrict attention only to the top four and
20 to J 33-70. The top four is sodium chloride, the J 33-70 is a
21 vanco product, and essentially difference equal to zero for the
22 other six. So even before getting into extrapolation, it's
23 worth noting that those six products, once again, it's sort of
24 drawing the line, time limitation type of thing. Assembling
25 the arrays from the carrier documents and so forth takes an

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1 enormous amount of time, and here I focused on just five of the
2 eleven products, so the majority of products were excluded.
3 And rather than trying to extrapolate across products, I did
4 not. I could have come up with a difference from these five
5 and extrapolated it to the other six, but recognizing that
6 there's heterogeneity across products and so forth, I didn't.
7 So those claims are ignored in the analysis. The difference is
8 set to zero for them.
9   So right off the bat there is, in terms of the total
10 amount of spending, it's more than $20 million of those
11 $185 million, so I think it's about $22 million. So about
12 12 percent of the spending -- I'm doing this a bit on the fly
13 in my head, but I think about 12 percent of the spending, just
14 I set difference equal to the zero right off the bat. So I
15 just wanted to make that point before going to the discussion
16 of any extrapolation.
17 Q. Can you remind the Court how the arrays came into play in
18 connection with setting the allowed amount for a Medicare
19 claim.
20 A. Sure. So for any of these products, the key distinction
21 between Medicaid and Medicare, if there's one thing to remember
22 about Medicaid and Medicare, Medicare, instead of paying based
23 solely on the AWP, let's say, of an Abbott product, for these
24 J-Codes, typically carriers used AWPs for multiple firms'
25 products and then took the median.

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1   THE COURT: And J-Code is when you have therapeutic
2 equivalents, generic?
3   THE WITNESS: That's right, that's right. And
4 basically the way these arrays work is, and, you know, there
5 are inevitably little exceptions here and there, but in general
6 the methodology takes the median of the generic prices --
7   THE COURT: Of all of them? That's what I couldn't
8 figure out. Of all the equivalent generics?
9   THE WITNESS: Well, there's a little bit -- there's
10 some variation across the carriers with respect to which
11 products get included in the arrays. So, you know, one carrier
12 might include -- there's a huge amount of similarity, but when
13 you look at, let's say, the array in '98 for Wisconsin
14 Physician versus Connecticut General, you know, they may both
15 have seven products in their array, and five or six may be the
16 same, but there may be one or two that differ. But it's not
17 necessarily the case that all products are included. In fact,
18 more often than, not all of the equivalent products are
19 included, but a very large number are included.
20   And so these arrays allow me to determine -- let's
21 pick a particular quarter, '97 quarter four. Suppose I have
22 the array for J 70-50, and let's say there are five products in
23 that array, two Abbott and three other firms' products. And
24 let's suppose just for simplicity that those prices are 8, 9,
25 10, 11 and 12, with Abbott at 11 and 12. They don't have to.

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1 They could be a third, 8 and 9; it won't have any effect on the
2 median. Suppose they're the 11 and 12 in that example. So
3 initially with their initial AWP the median is 10.
4   Okay, now suppose that one plugs in the price, that
5 pharmacy, 125 percent that I described earlier in for the
6 Abbott prices, they typically will fall below, often below --
7 in that example would fall below the eight. And so the median
8 would fall from 10 to 8. But it's not a one-for-one change,
9 which is to say, if you lower the AWP from 10 to 5, often with
10 Medicaid reimbursement you essentially cut in half the
11 spending, the (Inaudible) dispensing fee for a second. Here --
12   THE COURT: Here you're moving down the median.
13   THE WITNESS: You're just moving down the median, but
14 it's affecting all of the claims with that J-Code. So it is
15 a -- right, so basically using arrays, using an enormous amount
16 of array information that was assembled by Myers & Stauffer, I
17 determined how for many of these J-Code quarter carrier
18 combinations, how do alternative, you know, transaction-based
19 AWPs for Abbott products, how do those influence the median,
20 and then run that through the Medicare claims. So you can see
21 here there are 22 million, a lot more Medicare claims than
22 Medicaid claims, 22 million Medicare claims; essentially figure
23 out for each carrier J-Code quarter combination, what's the
24 effect on the median; and then see how claim by claim the paid
25 amount differs between -- you know, when you use that.

20 (Pages 74 to 77)

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1   And in some cases it won't be affected. So, for
2 example, if in that earlier example Abbott had the AWPs of 8
3 and 9, if you lowered their prices, it would have no effect on
4 the median, okay, because it's basically the middle price of
5 the five. And no matter what you do to these two prices, that
6 it's not going to move that --
7   THE COURT: Well, will you always know Abbott -- what
8 if Abbott is not in the array at all?
9   THE WITNESS: Then no effect.
10   THE COURT: So how would you know when you're
11 extrapolating whether in any given situation Abbott was in the
12 array and counted?
13   THE WITNESS: Right, so in this case, so initially,
14 analogous to the Medicaid, basically for the carrier J-Code
15 quarter combinations where I have an array, I run the algorithm
16 to figure out what is the difference versus what spending would
17 have been. Now let's think about other carriers first, like
18 the Vermonts from that earlier example. So one approach would
19 have been to simply take the averages for each of the J-Codes
20 and apply it to the other, the difference-to-spending ratio;
21 suppose the difference-to-spending ratio was 20 percent for one
22 of the J-Codes, apply that to the carriers for which I do not
23 have an array, the claims for the carriers where I do not have
24 an array. That would have been an approach.
25   However, in the same way that I probed on the

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1 comparability of my sample and the larger population for
2 Medicaid, I do it here as well. And how do I do it? You know,
3 if I don't have the array, what can one do? What I can see,
4 for each claim, whether the allowed amount is itself an Abbott
5 AWP. So for those J-Code carrier quarter combinations where I
6 have the array, in many instances an Abbott AWP is the median.
7 And so by definition, in those cases, the median moves because
8 when you adjust AWP at all, it always goes down.
9   THE COURT: But that's when you have the data?
10   THE WITNESS: That's when you have the data. Now,
11 but, having the claims data, having these millions and millions
12 of claims for other carriers, I can see, well, what about them?
13 How often do they have an Abbott AWP as the median? And so I
14 can gauge whether and to what extent. So how often is it the
15 case that an Abbott AWP is the allowed amount in the claim for
16 that carrier in that quarter.
17   THE COURT: I see. So you might not have the array,
18 but you'll see, bingo. Now, suppose you don't have that.
19   THE WITNESS: No, I do because I basically
20 assembled --
21   THE COURT: So suppose it's not Abbott's AWP.
22   THE WITNESS: Right, and more often than not it's not
23 Abbott's AWP. And so what I figure out is that for about one
24 in four claims in the array, in those -- I hate to keep saying
25 this, but I just want to be as precise as possible -- for those

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1 J-Code carrier quarter combinations where I have data, the
2 Abbott AWP is the median about 24 percent of the time. About
3 one in four of those cases has an Abbott AWP as the median.
4   Turning to the remaining carriers during a comparable
5 period, for them it's about 16.5 percent, so it's less common.
6 And that indicates to me, given my familiarity with these
7 arrays and my work, you know, with this kind of data before,
8 that the intensity with which the remaining carriers are using
9 Abbott AWPs is lower. And so in essence, rather than simply
10 taking the ratio for those initial carriers and applying it to
11 that other group, I see there's a difference between the two,
12 it is not the case that the population in my sample is fully
13 reflective, fully representative of the greater population, and
14 so I adjust down the numbers accordingly, scaling down
15 essentially by two-thirds to account for the fact that the
16 Abbott AWP is 50 percent more common, more frequently the
17 median in the -- feel free to stop me at any point. I'm trying
18 to --
19   THE COURT: It's late in the day, and I'm trying to
20 focus myself.
21   THE WITNESS: So here the earlier case, the Medicaid
22 case, I said, let's look at the 10 versus the 38; and they're
23 really comparable, and it's reflected in this subsequent
24 analysis that I did.
25   THE COURT: Right.

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1   THE WITNESS: These carriers, the Wisconsin Physicians
2 where I have the data versus the carriers where I don't have
3 the data, it is clear -- and you can imagine there was a
4 considerable amount of work that went into figuring out, is
5 this an Abbott, are these Abbott AWPs or not? And, you know,
6 there are some cases, some example here or there where in the
7 same quarter an Abbott product had the same AWP as another
8 product, but that's going to happen in both data sets. I can
9 tell you from having looked at dozens and dozens of arrays that
10 Abbott AWPs are often the median. And so --
11   THE COURT: You said a quarter of the time, right?
12   THE WITNESS: A quarter of the time, that's right.
13 And so I basically take the results for those initial carriers
14 and scale them -- so rather than taking that difference ratio
15 for the initial group of carriers, I scale it down by
16 approximately a third.
17   THE COURT: Where did you get that?
18   THE WITNESS: Or a fourth. It's basically it
19 represents the --
20   THE COURT: Where are we?
21   THE WITNESS: We're in the neighborhood of Page 124 of
22 the report.
23   THE COURT: That's the first --
24   MR. LAVINE: Tab B.
25   THE COURT: All right.

21 (Pages 78 to 81)

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 1        THE WITNESS:  So in Equations 10 and 11 on Page 125,
 2   I'm describing here basically how I'm calculating the
 3   difference for J-Code J and Carrier K over the period of
 4   interest.  So I apologize, I don't want to forget the equation.
 5   So just the big picture --
 6        THE COURT:  Others are probably more astute right now.
 7   I'm counting on my law clerk who wasn't sitting through this
 8   trial this morning.  So just in plain English, you've got a
 9   quarter that are the same.
10        THE WITNESS:  Yes.
11        THE COURT:  So you can extrapolate across the
12   carriers.
13        THE WITNESS:  Right.  A quarter in my sample have
14   Abbott AWPs.  A sixth or less -- I'm getting the numbers
15   confused, but less for the other sample.  So I've got a sample;
16   there's a population.  For the other carriers where I don't
17   have arrays, they have Abbott AWPs less frequently.
18        THE COURT:  So it's only a sixth of the ones you don't
19   have the data for are actually compensating at what the Abbott
20   one is?
21        THE WITNESS:  Exactly.  And I should note that for
22   every time that an Abbott AWP is the median, there are more
23   than two where they're above the median and affected.  Do you
24   see?  So it's not like by knowing -- it's not like only in one
25   in four cases is Abbott affecting the median.  There are a heck
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 1        MR. LAVINE:  It will help.
 2   Q.  Where you did have the arrays, how often was there an
 3   Abbott product, an Abbott AWP?
 4   A.  The vast, vast majority of the cases when, for these
 5   sodium chloride and these vanco J-Codes, when there is an
 6   array, an Abbott product is in there, so the vast, vast
 7   majority of cases.  And it is true, I mean, one can see from an
 8   examination of -- if one looks at Table 43, so this is also
 9   after Tab 1 --
10   Q.  The next-to-the-last exhibit for that tab.
11        THE COURT:  All right.
12   A.  So for Connecticut General, you see the first line there
13   summarizes the results of the analyses for the J-Code quarters
14   where I have array information.  I have data for the whole
15   eleven years, but for Connecticut General, there are about
16   540,000 claims in that last five-year period in which
17   the -- 540,000 claims, okay, for the five J-Codes that I'm
18   considering that are listed in the title of the table.
19        Now, of those, if you look one column to the left, you see
20   about 470,000 claims in which paid amount would fall if
21   Abbott's AWPs were replaced by 125 percent of the average
22   pharmacy.  So that's 86 percent of claims where there's
23   differences greater than zero, okay.
24        Now, going back to that 24 percent, now, remember, the 24
25   isn't Connecticut General specific, but suppose it was.  So
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 1   of a lot of cases where they're above the median, but this is
 2   just a measure of the intensity.
 3        THE COURT:  So a sixth don't -- only a sixth are AWP
 4   of the other --
 5        THE WITNESS:  Of Abbott, yes.
 6        THE COURT:  Of the other five-sixths, how do you
 7   figure out whether Abbott matters?
 8        THE WITNESS:  Right, so the assumption, the
 9   identifying assumption here is that the pattern that holds
10   within the arrays for which I have information, so for every
11   one time -- I don't have this number right here in my head, but
12   suppose that for every one time that an Abbott AWP is the
13   allowed amount, there are two where they -- two different
14   claims where they're not the allowed amount, but they affect --
15   but affect -- changing their AWP affects the reimbursement
16   amount.
17        THE COURT:  They're higher than the array.
18        THE WITNESS:  They're higher than the median, right.
19        THE COURT:  So you're just assuming that that's gong
20   to be the same --
21        THE WITNESS:  That pattern holds for the remaining --
22        THE COURT:  That the pattern holds.  And how do you
23   test that to see if it's true?
24        MR. LAVINE:  Can I just slip in one question?
25        MR. DALY:  No.
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 1   24 percent of the time Abbott's AWP is the median, okay; and in
 2   essentially all of those 24 percent of cases, moving their AWP
 3   is going to lower the allowed amount because the AWP always
 4   falls when you use the transaction-based price.
 5        THE COURT:  So you extrapolated that percentage.
 6        THE WITNESS:  Exactly.  So basically I say 24, and
 7   let's say there's another 62 percent, so that's about two and a
 8   half claims where Abbott is above the median but not the median
 9   for every one.  And the methodology, basically the assumption
10   underlying the methodology is that that pattern holds in the
11   remaining carriers, and it is --
12        THE COURT:  How did you test that?  Like, you could
13   test the last one.
14        THE WITNESS:  This, for example, with pulling in this
15   new Medicaid data, it is --
16        THE COURT:  How do you know if that's right, there are
17   consistent patterns across the carriers?
18        THE WITNESS:  Well, it is worth noting that the
19   carriers are basically operating under the same CMS guidelines
20   throughout this period, and it is true there's variation across
21   the carriers.
22        THE COURT:  There was some OIG report that talked
23   about it, right?  Or was that in a different context?
24        THE WITNESS:  It may have been.  Yes, maybe my mind is
25   getting tired now too.
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22 (Pages 82 to 85)

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1   MR. LAVINE: That was a Medicaid issue.
2   THE COURT: That was Medicaid?
3   THE WITNESS: So the identifying assumption of this
4 methodology is -- now, it's worth noting that this isn't
5 information for just four or five carriers. This is
6 information for -- actually, as you can see here listed, there
7 are several.
8   THE COURT: So you average the pattern?
9   THE WITNESS: Yes, I averaged the pattern across the
10 time periods because it bounces around a fair amount from one
11 period to the next. Things bounce with the Medicare somewhat
12 more than with the Medicaid where it's all driven by the Abbott
13 AWP. So essentially the methodology aggregates the information
14 from dozens of arrays. Now, it does it product by product, so
15 J-Code by J-Code, but it aggregates the information because,
16 for example, vanco tends to have a bigger difference because
17 its disparity from the other ones tends to be larger than for
18 sodium chloride. So it basically aggregates that information
19 across many, many arrays, and essentially aggregates the
20 information across those many, many arrays and uses, leverages
21 all the information -- in the case of Connecticut General,
22 540,000 claims, a million claims for Wisconsin physician and so
23 forth -- to estimate for the remaining claims.
24   Now, I should also note that in doing this, recall,
25 there are a whole number of things that I'm excluding from

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1 this. For example, those six J-Codes initially, I don't
2 extrapolate to them.
3   THE COURT: How many carriers did you have full data
4 for?
5   THE WITNESS: Full data for? Well, for the entire
6 eleven-year period?
7   THE COURT: I guess I asked that incorrectly. So
8 let's assume -- how many carriers are there all together?
9   THE WITNESS: There are -- well, it depends to some
10 extent on how you count them because there are multiple -- if
11 you go back -- and I apologize for continuing to push your
12 Honor from one table to another, but -- so if one goes to
13 Table 35, this provides information. And do you have
14 highlighted in yellow?
15   THE COURT: Yes.
16   THE WITNESS: So highlighted in yellow are the
17 carriers for which I have array information, and in white are
18 the ones for which I do not have array information.
19   THE COURT: So you probably have slightly less than
20 half?
21   THE WITNESS: Slightly less than half, that's right,
22 in terms of -- I'm just going to go to -- slightly less than
23 half, that's right.
24 Q. Are some of the carriers listed multiple times?
25 A. That's right. So Connecticut General you can see is

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1 listed in both the -- maybe that's the 7th line and the 8th
2 line. So there are some of the carrier numbers, like one
3 carrier, the Connecticut General arrays are used for
4 Carrier 54-40, for Carrier 55-35, and so forth. So this
5 overstates -- if you think about -- it depends on -- think
6 about the carriers in terms of their numbers, if this is the
7 right figure, if you think about it in terms of --
8   THE COURT: So if in any quarter you had too few
9 carriers that you had data for, did you say, "I don't have
10 enough to know a pattern"?
11   THE WITNESS: So it's certainly true that I dropped
12 claims where the data did not suggest it would be appropriate
13 to extrapolate, so certainly for those six J-Codes we talked
14 about, but also extrapolating back in time, I -- so if we go
15 back to the Table 43, you'll see that, for example, for
16 Connecticut General, I only went back to early '95 because my
17 scrutiny of the data for Connecticut General in the first four
18 years of the period suggested to me -- I didn't see enough
19 Abbott AWPs then, so I didn't extrapolate back during that
20 period. And similarly, for those remaining carriers, I ignored
21 the first part of the data set because, once again, the Abbott
22 AWPs were less common in '91, '92 and so forth because I don't
23 have arrays in '91 and '92.
24   THE COURT: It sounds like you're making far more
25 subjective judgments with respect the arrays than you really

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1 would of the Medicaid. In other words, what's enough to be a
2 pattern, what isn't? Do I have enough data, don't I? And
3 there's no way to test it.
4   THE WITNESS: Well, I think it's useful to sort of see
5 how the difference-to-spending ratio differs between my sample
6 and the population to which I'm extrapolating. So, first, in
7 terms of the across-carrier extrapolation, so for those carrier
8 J-Code quarter combinations where I have the array, if one
9 looks there, the ratio of difference to spending is about
10 29 percent. Okay, it's lower than for Medicaid because of this
11 thing we were talking about that went -- the median doesn't
12 move as much as the AWP moves. So about 29 percent.
13   For those carriers to which I'm extrapolating, it's
14 less than half that amount, so it's like 14 percent because I'm
15 accounting -- I'm sort of scaling down by even more than our
16 discussion a little while ago suggested to account for this
17 difference in the data.
18   THE COURT: So if you have, guesstimate here, a
19 hundred carriers here?
20   THE WITNESS: Ninety, I think there are.
21   THE COURT: Ninety, all right, ninety. If you had
22 eighty carriers, you'd be able to see a pattern and
23 extrapolate. But what if you only had five carrier arrays?
24 Did you just sort of say, "I can't do that"? Am I understanding
25 this wrong?

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1   THE WITNESS: No, no, you're understanding it
2 correctly. So I am essentially in this case aggregating
3 information from multiple arrays for the same carrier. So the
4 carriers definitely change. So Wisconsin Physician moved from
5 having five products to seven products, added in new products,
6 so they're changing all the time. So just as with Medicaid,
7 the notion that it's 10 states only, that's not the way that I
8 would phrase it because these arrays are constantly -- are
9 being updated quite a lot over the time period. So the
10 information that is included in the arrays, there's a lot of --
11 there are many, many arrays. I don't have the number off the
12 top of my head here, but there are dozens and dozens of arrays
13 that I'm using to calculate this difference-to-spending ratio.
14 And, you know, like I said, there's big variation within a
15 carrier. And then I'm using the information for those arrays
16 to extrapolate to this other group, which I recognize is, you
17 know, having drilled down on it, they are somewhat different.
18 And so this is, it's a harder -- I'll concede it's a harder
19 exercise just because of the specifics of it. We're talking
20 about arrays and so forth. But the carriers were all operating
21 under sort of similar guidelines; and to the extent that they
22 do differ somewhat, I'm really penalizing, I'm really cutting
23 down that difference-to-spending ratio, whereas with
24 Medicaid --
25   THE COURT: Is there any evidence that CMS actually

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1 went and surveyed and regulated the carriers? You say they're
2 all under the CMS, and my impression from other litigation --
3 I've been doing this now for a decade -- is that CMS actually
4 didn't do very much to survey the carriers, right? I mean,
5 they may have kept track of the data, but they weren't policing
6 them. Is that wrong? Do we have evidence to the contrary?
7   THE WITNESS: That's probably not my best --
8   THE COURT: All right. But I'm just saying, you keep
9 saying they were supervised by the same group. They were like
10 lone wolves, weren't they, each one doing their own thing?
11   THE WITNESS: Well, I think that there's some sense in
12 which carriers look to one another to some extent.
13   THE COURT: Well, do you have evidence of that?
14   THE WITNESS: There are some cases where certain
15 carriers that I analyzed eventually piggybacked on Wisconsin
16 Physician Services, for example, so there is some evidence of
17 this. But I will concede, there's no question, this was a
18 harder exercise. And because of the -- I mean, I tried through
19 a number of channels to be very conservative here; drop six
20 products from the analysis, don't go back in time all the way
21 to 1991 because there's not enough Abbott products, you know,
22 really scale down the difference going from my sample to the
23 other group because it's clear that the Abbott AWP is being
24 used less frequently there. And this, in my professional
25 judgment, using all of my experience as an economist -- and,

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1 you know, I will admit this is a hard -- this is not --
2   THE COURT: This is a harder nut.
3   THE WITNESS: This is a harder nut to crack.
4   THE COURT: So if I were concerned about the whole
5 thing you did, would at least the one quarter that are Abbott
6 that are right at the median, would that be a subset that you
7 felt confident with?
8   THE WITNESS: Absolutely, I mean, I think that at some
9 level it seems plausible -- so I think it's 1.3 million
10 claims in this other group of carriers that have an Abbott AWP
11 as the allowed amount. And I'm sure that one can find an
12 example where in one of those NDC quarter combinations, both
13 Abbott and Baxter had 10.03, like, there's a little bit of
14 that, but it's certainly not the dominant thing going on,
15 having looked myself at these arrays. But, absolutely, those
16 are -- it is clear what's going on.
17   THE COURT: So for the one quarter where Abbott's was
18 right at the J-Code, you would say it was an extremely accurate
19 methodology, I think. With the others, you're saying you're
20 doing the best you can, the most conservative you can with the
21 data you have?
22   THE WITNESS: Absolutely. And it is my professional
23 judgment that if I had perfect array data for all eleven
24 products for all of these carriers over this entire period, the
25 difference that would emerge from that analysis with perfect

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1 data would be considerably higher than the one that is
2 resulting here.
3   THE COURT: You mean more adverse to Abbott?
4   THE WITNESS: More adverse to Abbott, that's right.
5 I'm sure there are cases where maybe if we pulled out data for
6 North Carolina Blue Shield and we just happened to have their
7 array, in the same way that some states are a little above the
8 extrapolation, some states are below, sure, that would be true.
9 But in general, the combination of dropping six J-Codes from
10 the analysis, dropping big chunks of the time period from the
11 analysis, scaling down when going from the sample to the other
12 group -- and this is, you know, really, I mean, this was a
13 hard -- this was something that I kind of warmed up on. This
14 is a hard part of the analysis, but it is, in my judgment, this
15 number, if I had perfect data, that difference would be
16 considerably larger.
17 Q. Dr. Duggan, what are all the dashes on Tables 43 and 44?
18 I'm not sure that's been clearly described.
19 A. The dashes on 43 and 44 represent those carrier time
20 period combinations that I just drop. So, for example, for
21 Connecticut General on that third line, you can see that I'm
22 only going back in time to the first 130,000 claims. I ignore
23 the preceding 190,000 claims because, as I mention in the
24 report, the frequency with which they're using the Abbott AWPs
25 in that earlier period is much lower. So I'm zeroing out

24 (Pages 90 to 93)

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1   there, I'm zeroing out at many other periods within carriers,
2   so in a sense penalizing more -- it's a little bit analogous to
3   the sort of Medicaid accounting for the fact that the spreads
4   were narrower at the beginning of the period, but I'm
5   penalizing more aggressively with this Medicare analysis than
6   there.
7   THE COURT: Thank you. Now, are you almost done
8   because I'd like to finish him today, and then we'll go
9   tomorrow?
10   MR. LAVINE: Yes, very close to done, Judge.
11   THE COURT: So three minutes, done.
12 Q. Did you test your Medicare methodology and extrapolation?
13 A. I mean, this one is a harder one to -- it's a more
14 difficult one to test, admittedly, because I don't have the
15 North Dakota Blue Shield, I don't have those arrays, and there
16 would be more variability for this case than the others.
17   THE COURT: Have you tried to get those, the arrays?
18   THE WITNESS: Basically my understanding is that all
19 of the arrays that could be obtained were obtained, and that,
20 you know, I guess in the same way one could think, you know,
21 maybe it's a draw-the-line kind of thing, so I didn't go to
22 some of those other products and so forth, but my understanding
23 is that the arrays that could be obtained, given the -- I mean,
24 this was an enormous amount of work to assemble these arrays
25 for all these products -- is that I got what was available.

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1   But I do sort of use the methodology within these carriers to
2   try to see, you know, if I pretend the data starts somewhat
3   later and so forth, do I get similar results? And the results
4   in the aggregate are similar, you know, I'll concede that it's
5   not as -- it would be -- it's a -- but, yes, I did probe it to
6   the extent that the available data permitted.
7   And I should note, the data that are available, this
8   is an incredible amount of data, claim-by-claim data for all
9   22 million claims during this eleven-year time period of
10 interest, and, you know, to having drilled down to this data to
11 a great extent to try to come up with the most accurate
12 estimate as possible, and where it looked like this
13 extrapolation was not appropriate across products, earlier
14 periods and so forth, I just didn't do it. I just zeroed it
15 out.
16   THE COURT: Thank you.
17 Q. So on average, did you examine the difference between the
18 allowed amounts in the Medicare claims where you matched them
19 to arrays as compared to where you did not match them?
20 A. Yes, and in general the two were similar. You know, they
21 weren't identical, but they were qualitatively similar. It's
22 not like the remaining carriers were reimbursing at 350 while
23 the carriers for which I had data were reimbursing at 10. You
24 know, there were some -- it was comparable to somewhat -- I
25 think the allowed amounts were somewhat lower for the remaining

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1   carriers, but pretty close. And to the extent that they were
2   lower, that would lead to a lower difference as well, given my
3   methodology.
4   Q. But that issue, that was something you considered?
5   Q. Absolutely, absolutely.
6   THE COURT: Are you finished?
7   MR. LAVINE: One wrap-up question?
8   THE COURT: Absolutely.
9   Q. Can you describe and explain your level of confidence that
10 the work that you performed in this case and the opinions you
11 reached are to a reasonable degree of economic certainty.
12 What's the level of your confidence?
13 A. I, you know, having worked incredibly hard in deploying,
14 like, all the skills that I've acquired over graduate school
15 and my ten years as a professor, it is my judgment that the
16 estimates that I've come up with are incredibly reliable, are
17 very, very reliable. And I feel, you know, that to the extent
18 that the available data permitted or the available time
19 permitted, I probed the validity of these analyses; you know,
20 the within-state extrapolation, the across-state extrapolation,
21 the within-carrier extrapolation. I'll concede the
22 across-carrier extrapolation is a little tougher, but, still, I
23 feel very confident that were perfect data assembled with
24 infinite time, that the difference, that the aggregate
25 difference would be higher. But, you know, I've tried to

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1   telescope in on the most accurate estimate possible, and, when
2   there were forks in the road, taken a conservative approach.
3   So I feel really very good about the precision of this. I
4   would have liked the 6 percent to be 0 percent, but other than
5   that, I feel pretty good.
6   THE COURT: Thank you. So we all need a break here.
7   Tomorrow, now, what time is the Schering-Plough?
8   THE CLERK: Three.
9   THE COURT: Three o'clock, so I don't think that's
10 going to take that long, but I may be wrong. So we're going to
11 go from 2:00 to 3:00. We'll take a break for a possible
12 settlement. And I think, Department of Justice, are any of you
13 involved in that?
14   MR. HENDERSON: The Department of Justice will be here
15 for the settlement hearing.
16   THE COURT: How long will that take? Are there
17 objections?
18   MR. HENDERSON: Not that I know of, but I don't know.
19   THE COURT: If there are no objections, it will be
20 very fast. If there are objections, it could be, let's say,
21 half an hour, but otherwise you have the rest of the afternoon.
22 If we don't finish, it's very important and very difficult --
23 we'll finish at least you tomorrow so you can leave. And your
24 experts, do you want to have -- I know it's very expensive --
25 do you want them here no matter what?

25 (Pages 94 to 97)

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1   MR. DALY: Your Honor, if we're going just 2:00 to
2 5:00 with an indeterminate break in there, I'm thinking I may
3 want to release them.
4   THE COURT: What?
5   MR. DALY: I may want to release them for tomorrow on
6 the ground that I think, if we have essentially two hours
7 tomorrow, I think it will take me two hours to --
8   THE COURT: I'm thinking it's very important.
9   MR. DALY: Yes.
10   THE COURT: And I don't know how you thought we were
11 going to squeeze in spoliation and the motion for summary
12 judgment. Either you're the most optimistic people in America
13 or I should be complimented that you thought I understood this
14 already. This has been unbelievably helpful today, and I thank
15 you. I'm sure tomorrow I'll learn more, but maybe if you
16 wanted to keep one expert around, there should be some time for
17 it. I think the Department of Justice should know, right,
18 whether or not there are going to be objections from New York
19 and Massachusetts? At this point you should know.
20   MR. HENDERSON: I think we should. The last
21 communication I heard, your Honor, there was still a little
22 uncertainty about it. We didn't have a final communication
23 from the states. I'm a little on the sidelines, so I don't
24 know the details, but we think there are no objections.
25   THE COURT: Well, could you e-mail Mr. Alba and let us

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1 know and let them know because, truthfully, if you have two
2 hours, then there will be some re -- I mean, I think, as a
3 practical matter, at most we'd hit one expert, even without --
4 even if I had only --
5   MR. DALY: I think at most, Judge, I agree.
6   THE COURT: If you want to let them go because of the
7 expense, I'd certainly understand that --
8   MR. BREEN: Your Honor, I think it's very unlikely
9 there are going to be any objections.
10   THE COURT: The reason I need to do this is, there are
11 reasons I have to approve this by year end, or I wouldn't have
12 interrupted you. It has something to do with, what is it, a
13 corporate transaction?
14   MR. BREEN: Acquisition.
15   THE COURT: Yes, an acquisition. So you can find out
16 the nitty-gritty details from them, but if there are no
17 objections, this will not take more than three minutes. If
18 there are objections, I need to finish it, which is the only
19 reason I'm cutting into your valuable time.
20   MR. DALY: We'll work with the Court's schedule.
21   THE COURT: All right, thank you.
22   MR. DALY: Thank you, Judge.
23   THE CLERK: Court is in recess.
24   (Adjourned, 5:03 p.m.)
25

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1   C E R T I F I C A T E
2
3
   UNITED STATES DISTRICT COURT)
4 DISTRICT OF MASSACHUSETTS   ) ss.
   CITY OF BOSTON   )
5
6
7   I, Lee A. Marzilli, Official Federal Court Reporter,
8 do hereby certify that the foregoing transcript, Pages 1
9 through 99 inclusive, was recorded by me stenographically at
10 the time and place aforesaid in Civil Action No. 01-12257-PBS,
11 In Re: Pharmaceutical Industry Average Wholesale Price
12 Litigation, and thereafter by me reduced to typewriting and is
13 a true and accurate record of the proceedings.
14   In witness whereof I have hereunto set my hand this
15 7th day of January, 2010.
16
17
18
19
20   /s/ Lee A. Marzilli
          _____
21   LEE A. MARZILLI, CRR
          OFFICIAL FEDERAL COURT REPORTER
22
23
24
25

26 (Pages 98 to 100)